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ABSTRACT

THE MICROFOUNDATIONS OF SECURITY AND IMPLICATIONS FOR GOVERNANCE

By

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Broader notions of "human," or individual, security have been criticized for their conceptual ambiguity and lack of clear actionable implications. These shortcomings are significant because human security is advocated as a central concept in international governance and development. I propose studying the microfoundations of security (i.e., individual-level attitudes, perceptions, and behaviors related to security considerations) as a means of providing a theoretical and empirical basis for the idea of human security. The microfoundations approach and its focus on methodological individualism provide a methodology that corresponds closely to the theoretical underpinnings of human security. A departure point for the theoretical framework for security microfoundations is a productive literature on individual and social risk perception that has failed to penetrate the mainstream study of politics and governance. Major components of the security microfoundations framework developed here include: individual vulnerabilities and uncertainty, approaches and orientations toward insecurity, informational characteristics of the individual, and environmental patterns and processes. Empirical tests of the theoretical framework are carried out in three distinct subject areas: attitudes toward globalization, evaluation of political corruption as a threat, and the perceived threat from terrorism. The testing results demonstrate the usefulness of the security microfoundations framework as well as the importance of topical and sociopolitical context in individual security evaluations. Implications for governance are explicitly discussed.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

THE MICROFOUNDATIONS OF SECURITY

Introduction

Social and behavioral scientists have spent decades examining the microfoundations of mass phenomena like purchasing behavior, political participation, and vote choice, as well as elite phenomena like policy preferences and voting. While researchers have occasionally acknowledged that individual perceptions of security affect such phenomena, researchers have not undertaken a full examination of the microfoundations of security. A long-dominant security paradigm that focused on the integrity and power of states rather than individuals was perhaps largely responsible for this gap in understanding. However, the gap is a significant one because individual perceptions of security may underlie and unify many of the attitudes and behaviors observed in a political community.

The term "microfoundations" is an economic one that emerged from a focus on methodological individualism and a desire in the 1950s and 1960s to better integrate the aggregate theorizing of macroeconomics and the individual-level (persons, firms, etc.) theorizing of microeconomics (Janssen 2006). The worry about analyzing the aggregate level in isolation from micro-level behavior is that such analysis opens the door to a number of logical and inferential fallacies. An aggregate-level theory with micro-level foundations is on much firmer footing.

The state-based model of security tends to assume that the interests and preferences of the state are imputed rather homogeneously to all the individuals within the state. A microfoundations approach to security inverts that thinking by advocating the idea that collective security concerns and behaviors are (at least in part) a function of individual security perceptions, attitudes, and behaviors. These two approaches are

neither antagonistic nor mutually exclusive. Certainly, threats to the institutions and resources of the state are also threats to the individuals within the state. However, perceptions of threat and behavioral responses to threat also depend on mechanisms operating at the individual level. Political institutions do not operate autonomously from human input. Elite governance decisions about security are the result of both elite perceptions and the perceptions of important constituencies. Similarly, elites who wish for their security perceptions and policies to win the day must effectively communicate threats to masses and must get the public to buy in or at least acquiesce to the plan.

A security microfoundations approach examines the inextricable linkages between individual and collective security through the lens of the individual. In doing so, it integrates the theoretical approach of economic microfoundations with the attitudinal and behavioral insights of psychology and sociology. Adopting a microfoundations approach does not require assuming that all aggregate security phenomena are a simple sum of their parts; the process of translating from the individual to the aggregate level is mediated by social forces, events, and institutional frameworks. Nor must such an approach presume that individual mechanisms are universal and context is inconsequential. To the contrary, inputs from the individual's environment are crucial determinants of individual threat perceptions and responses. The other people in that environment are particularly important. My security perceptions and resultant behaviors have implications for your security perceptions and behaviors, and *vice versa*.

Government as a mechanism for enhancing the actual and perceived security of the individual is an idea rooted deep in political theory. Thomas Hobbes' 17th-century governmental "Leviathan" is a powerful force that pulls individuals out of a dangerous

"state of nature," a place of constant threats to individual security. Of course, the government itself is a menace to the individual here, as attested to by Hobbes' reference to government as a biblical monster. The 18th-century government defined by Jean-Jacques Rousseau, on the other hand, is a mechanism resulting from a "social contract" that applies the "whole common force" to the defense and protection of individuals. Similarly, Charles Montesquieu defines "political liberty" in the 18th century work *The Spirit of the Laws* as a "tranquility of spirit" that results when government ensures that "one citizen cannot fear another citizen." In sum, government is a mechanism that reduces conflict, improves productivity, and enhances quality of life by allowing individuals the luxury of not having to fret constantly over the next approaching threat.

A debate over the meaning of "security" generally (see Wolfers 1952; Ullman 1983; Mathews 1989; Haftendorn 1991; and see Baldwin 1997 for a more comprehensive list) revived the idea of individual security. This debate culminated in the development of the "human security" concept in the early 1990s as the end of the Cold War and the acceleration of globalization made the state-based model of security seem antiquated. Historical reviews of the human security concept (e.g., Paris 2001; King and Murray 2001; Bajpai 2003; Henk 2005) typically attribute its first full articulation to a report issued by the United Nations Development Program (UNDP 1994). However, a debate over the fundamental meaning of human security has stymied attempts to move forward with a human security agenda (Suhrke 2004). The essential problem is that the broad, "bottom-up" (Hoogensen and Stuvøy 2006) version of human security, which centers on the individual's point of view and incorporates a wide range of threats, appears to lack

focus and any practical or analytical core (Suhrke 1999; Paris 2001, 2004; Thomas and Tow 2002).

Meanwhile, a literature on risk stretching back to the 1970s in psychology, sociology, and anthropology (see reviews in Kasperson *et al.* 2003; Adam and van Loon 2000; Rohrmann and Renn 2000; Slovic 2000a; Lupton 1999) has gone relatively unnoticed by students of politics and governance. This research has focused on such topics as socio-cultural and social constructionist views of risk (Lupton 1999), the modern "Risk Society" and its reflexive character (Beck 1992, 1999), how individuals psychologically perceive risks (Slovic 2000a), cross-cultural differences in risk perception (Renn and Rohrmann 2000), the communication of risks (Jaeger *et al.* 2001, 127-29), and the way social processes can amplify or downplay particular risks (Kasperson *et al.* 2003).

I propose that integrating the insights from the conceptual models for human security and risk perception is a significant step in producing a framework for understanding the microfoundations of security. The microfoundations approach, in turn, provides a methodology that aligns with the theoretical underpinnings of both human security and risk perception. The envisioned framework goes beyond the risk perception literature, which has not utilized many of the tools of political scientists and has not addressed many topics of basic political importance (though it has examined issues with policymaking implications). The framework also carries the potential to answer standing questions produced by risk perception research. Additionally, the proposed synthesis offers the promise of building human security from the bottom up in a way that makes the concept more useful for policymakers.

In what follows in this chapter, I first argue for the importance of understanding the microfoundations of security. I then examine the problems associated with defining and acting on human security and discuss the relevant findings of the risk perception literature. After covering these two constituent parts, I then propose their integration and expansion into a broader framework. A final section of the chapter summarizes and raises additional considerations.

Significance

An Obligation of Governance

Humanitarian concerns and the desire to craft more effective policies are the principal reasons for policymakers to care about the microfoundations of security. A fundamental presupposition of human security is that each human life has an inherent worth and should be protected. While expending resources to reduce objective threats to the individual certainly recognizes the worth of human life, feelings of insecurity are also harmful to the individual. The worry and fear associated with feelings of insecurity take a psychological and physiological toll. Governments can better achieve humanitarian aims by using an understanding of the microfoundations of security appropriately to calm their citizens, thereby reducing pain and suffering.

As mentioned earlier, a core function and obligation of government is to enhance individual security. This obligation goes beyond the humanitarian imperative, which is not acknowledged by every regime. Hobbes' Leviathan is not a government based on humanitarian concerns. The obligation is clearer in a liberal democratic regime, however. A government has unfinished work if citizens, the "bosses" in representative democracy,

have serious feelings of insecurity. If effective accountability mechanisms are available, policymakers also have personal stakes in fulfilling this obligation – else they be removed from office. The potential for rebellion or revolution is a strong incentive to pay attention to feelings of insecurity among the people of a state as well, regardless of regime type.

Negative Ramifications

Policymakers further have incentive to care about the microfoundations of security because automatic responses to objective threat stimuli and the more subjective weighing of a situation can both produce negative ramifications. Though there is much room for additional empirical evaluation of such claims, the common wisdom is that human beings who feel insecure develop attitudes and beliefs and take actions that can be destructive to themselves and others. When governments fail or are incapable of making individuals feel secure, negative aspects of human nature show through. People fight, kill, steal, and hoard under such circumstances. They struggle to gain a competitive advantage, and they covet what others possess. They blame other groups for their misfortunes. They find ideological means of coping, such as religious radicalization or hyper-nationalism. They contribute to collective-action problems and set off situations of panic and chaos.

Relying on objective measures of risk and governmental proclamations would not require an understanding of micro-processes and the social influences on those processes. However, a core finding in the risk perception literature is that mass perceptions of threat do not align with more "objective" risk assessments based on expert analysis or event

probability (Slovic 2000a). Therefore, despite their importance, government studies and proclamations of threat are not the last word. Compared to the objective risks posed, people tend to worry excessively about things like flying on airplanes and nuclear power, while tending to overlook the substantial risks from things like driving in automobiles, smoking, and heart disease (see Ross 1999; Glassner 1999). These misalignments have implications for a wide range of policy areas, from transportation to public health to the environment. Improved alignment between objective and subjective risk would allow governments better to set priorities and to obtain public support for making sacrifices necessary for the collective good.

As Hurricane Katrina approached the Louisiana and Mississippi coasts in August 2005, the National Weather Service warned that the area would be uninhabitable for weeks or longer and that water shortages would "make human suffering incredible by modern standards" (National Weather Service 2005). The warnings also spoke of household appliances and light vehicles flying around and the certain destruction of all wood-framed, low-rising apartment buildings. Some individuals in the New Orleans area likely never received these warnings, and others had no means to flee. However, some individuals heard these warnings and refused to leave anyway. Similar stories emerge from the September 11, 2001, terrorist attacks on the U.S. Many people died in the twin towers of the World Trade Center because they failed to heed evacuation warnings or were told by officials not to worry (National Commission on Terrorist Attacks upon the United States 2004, 286-89). In both cases, misalignments between subjective and objective security led to significant casualties and suffering.

Another key observation is that protecting people from physical threats is sometimes not enough to prevent conflict and other negative consequences. The nation-building efforts in Iraq and Afghanistan illustrate this point. U.S. efforts to "win the hearts and minds" of the Iraqi people have faltered in part because such winning also requires making people feel secure, which means both enjoying physical security and being able to project future survival and well-being in a relatively confident manner. Deep ethnic and religious cleavages and a long history of severe mistreatment and conflict in Iraq tend to negate positive assurances about the future, and the infiltration of terrorists has exacerbated the problem. Assurances about future well-being also rely on development, which actual and prospective violence deny. The "Surge" policy of the U.S. in Iraq, an intense deployment of additional troops, was based on such thinking. Also broadly recognized now is that even if violence in Iraq stopped immediately, long-term feelings of insecurity would pose problems for development and for keeping the peace.

The civil unrest in France in 2005 is another illustration of this point. While the accidental deaths of two teenagers supposedly precipitated the riots and violent clashes with police, feelings of insecurity spurred the violence. High unemployment and low wages in immigrant communities (Smith 2005) combined with well-intentioned government policies that tend to ignore ethnicity (Blum 2002) to generate feelings of insecurity, neglect, and invisibility. Again, while death apparently triggered the violence, the underlying reasons were not all based on objective risk or mortal danger.

Global Governance

Yet another reason to care about the microfoundations of security is that the United Nations and other international actors have determined that individual security is an integral part of many different types of programs. These organizations largely have adopted broad, bottom-up visions of human security that presumably rely on the microfoundations of security. As mentioned previously, the UNDP's report in 1994 established a definition of human security. In a 1999 speech to the U.N. General Assembly, U.N. Secretary-General Kofi Annan stated that traditional notions of sovereignty insufficiently addressed the fundamental freedoms of individuals (United Nations 1999). By questioning traditional ideas of sovereignty, Annan was also implying that the nation-state model of security was outdated. Speaking at the Millennium Summit the following year, Annan talked about the global issues of "freedom from want, freedom from fear, and the freedom of future generations to sustain their lives on this planet" (United Nations 2000). These three freedoms represent elements of human security as articulated by the U.N. The last item in this list most closely approaches traditional ways of thinking about security, but it also implicitly acknowledges threats from sources other than guns and bombs. Accepting his Nobel Peace Prize, Annan in 2001 further stressed and articulated the global implications of human insecurity in saying, "When States undermine the rule of law and violate the rights of their individual citizens, they become a menace not only to their own people, but also to their neighbors, and indeed the world" (Annan 2001). In keeping with messages from the U.N., the Commission on Human Security said in its 2003 final report that human security requires an integrated approach

and that human security necessitates systems that provide for "survival, dignity, and livelihood" (Commission on Human Security 2003, iv).

The U.N.'s focus on human security seemingly has intensified over the last few years. In 2004, the U.N. created the Human Security Unit within the Office for the Coordination of Humanitarian Affairs and gave that unit the responsibility of integrating human security into all U.N. activities. Furthermore, the U.N. Secretary-General's High-Level Panel on Threats, Challenges, and Change has said that security, development, and human rights are indivisible (United Nations 2004) and has gone so far as to reinterpret the United Nations Charter to refocus the organization on matters of human security (Slaughter 2005).

In the way of example, anti-terrorism efforts represent a policy area in which the microfoundations of security play an essential role. Governments in terrorist-targeted countries need their citizens to cope with fear while being responsive to fear messages when appropriate. Governments also need to build trust in risk communication; people may eventually act in ways contrary to their interests if they have felt duped by the government in the past. The George W. Bush Administration in the U.S., with its color-coded terror warning scheme, has had to ask how it can effectively warn people without earning a reputation for "crying wolf." Further, the global community and concerned policymakers within countries that serve as incubators for terrorists need to understand the perceived threats and forms of uncertainty that push individuals to use terrorist means to achieve their goals. There is much talk about "addressing the roots" of terror rather than simply attacking the problem by militaristic means, but what sources of individual

insecurity are responsible? Individual poverty is one standard but inadequate answer, as destitute and poorly educated individuals make unreliable terrorists.

Policies related to globalization constitute another example of an area in which the microfoundations of security seem quite important. Anti-globalization sentiment is found worldwide, even in countries that compose the core of the global economy. Informed policymaking that correctly weighs costs and benefits requires understanding the reasons for such sentiment. Why do some individuals view globalization as a threat? Societies that have decided to attempt keeping pace with the irrepressible march of globalization at times must convince citizens to overcome their fears. The standard rational-choice answers provided by political economists about attitudes toward globalization (Scheve and Slaughter 2006) are compelling but incomplete. Other mechanisms appear to contribute to apprehension about a globally connected world, as well. Studying security-based apprehension about democratization stands to produce valuable information for policymakers in much the same way.

A Changing World

The technological advances and economic growth of the modern era are double-edged swords. In many places life spans have increased dramatically, but we should not necessarily expect these improvements to produce a corresponding bump in perceptions of security. Human beings have always lived with fear, worry, and uncertainty. What sets the current period apart are the types of new threats generated by advanced technology and the availability of information concerning threats. The overall stakes in terms of

human lives and suffering are potentially greater now, as well. These trends argue in favor of better understanding the microfoundations of security.

The types of threats that religious texts spoke of thousands of years ago – hunger, pestilence, violence from one's neighbor, the power of nature – are still everyday concerns for large swathes of the world's population. The threat posed by the state for many people in such situations only compounds the misery. Again, the presumed consequences in developing areas are devastating. Economic and political development are thwarted as people act on threats both perceived and real. Ethnic groups attack one another as they compete to fend off poverty or simply out of fear of the "other." Hoarding responses to threats prevent medicines and food from helping people. Government officials extract rents from the system to fend off threats to themselves and their families, thereby worsening threats to the general populace. Misinformation, superstition, cultural taboos, and claims of miracle cures facilitate the spread of menacing diseases like HIV/AIDS.

The vulnerabilities (perceived and real) produced by severe inequalities in wealth and power further generate conflict (Wilkin 1999), rebellion (Gurr 1970), and complex human emergencies (Auvinen and Nafziger 1999). And while economic and political modernization ultimately may reduce such problems, transitional periods are also dangerous times. Unpredictability and the breakdown of routine are marks of these periods. The fluctuating environment produces both threats and opportunities. Income inequality may actually increase during economic transitions (Kuznets 1955), though this is not a foregone conclusion (Acemoglu and Robinson 2002). Public corruption, too, may increase during democratic transitional periods (Montinola and Jackman 2002), thereby

producing a variety of economic, political, and social ills (Rose-Ackerman 1999). Furthermore, drastic changes in a society can bring into being extreme attitudes that generate various forms of destruction (Hoffer 1963).

Given the severity of the consequences, better comprehending the mechanisms that produce insecurity at the individual level is essential. However, the importance of comprehension is not limited to the developing world. Threat-based phenomena like those just enumerated may be more conspicuous in developing countries, but more developed countries are not immune from them. The roles of threat and uncertainty in the developed world are subtler but also somewhat perplexing given the extraordinary standard of living and the way that government regulatory structures have reduced everyday risks. However, as pointed out by sociologists (e.g., Beck 1992, 1999), technology is a cause of fear and anxiety in the modern world. Research technologies allow us to "discover" previously invisible (and often inconsequential) threats (Ross 1999). Information technologies permit the rapid and pervasive spread of information about risk, as the imperative to maximize profits drives the media to accentuate and dwell on dangers. Additionally, technological innovations are simultaneously solutions and new threats. No less than the venerated British physicist Stephen Hawking recently declared that he was not sure how the human race would survive the next hundred years in the face of new technologies and their unintended consequences.[1]

Large-scale environmental changes, some linked at least in part to new technologies, are also liable to produce insecurity. Rising sea levels will likely threaten trillions upon trillions of dollars worth of property and infrastructure, while population

[1] In an audio posting on the Internet, Hawking posed the following question: "How can the human race survive the next hundred years?" His intention was to stimulate thought and to bring awareness to the dangers currently facing humanity. See Dr. Hawking's video posted at YAHOO! Video.

growth and migration are putting pressure on water supplies throughout the world. Climate change could be exacerbating natural phenomena like hurricanes, wildfires, and pandemic, as well. This account is not intended to be alarmist. The point is that precious little thought and planning have gone into dealing with the individual insecurity and ramifications created by such phenomena.[2] What happens to societies in the face of such loss?

Messages about threats are ubiquitous, perhaps especially in the developed world. Government agencies compete for funding by accentuating the specific threats they aim to address, while politicians offer differing interpretations of threats according to their ideological inclinations. News media make big money by relaying and framing danger, and journalists have many tools at their disposal for generating fear (Glassner 1999). Local newscasts in many parts of the U.S., for example, are little more than a nightly litany of robberies, stabbings, shootings, kidnappings, and chemical spills. The national media is no different, and the general public is an enthusiastic accomplice. The sniper attacks in Washington, D.C., were the most closely followed news story in the U.S. in 2002 (Pew Research Center 2002). Waves of stories about child kidnappings (in 2002) and shark attacks (just prior to 9/11) produced immense interest as well, despite no actual change in risk (Wilson, Martins, and Marske 2005; CNN 2002).

The biggest and most significant challenge may be getting policymakers in developed states to care about individual insecurity. As Liotta (2005) notes, intervention on behalf of individuals in other states still typically occurs only when such intervention serves the traditional ends of powerful states. Why should policymakers in the developed

[2] Encouraging counter-examples are beginning to emerge. For example, Norway recently built a "doomsday" seed vault inside an Arctic mountain to safeguard the existence and future diversity of vegetative life.

world care about insecurity in other areas of the world? Echoing Annan's earlier comments, the "flattening" of the world via globalization means that the negative ramifications of feelings of insecurity spread across state borders, thereby making human suffering an "irrevocable universal concern" (Axworthy 2001, 20). Policymakers in the developed world must also realize that "developing" areas exist within the borders of nearly all states. For people living in such areas, the conditions (and consequential feelings of insecurity) often are not much different from those in the developing world. These pockets of distress and discontent may grow as income inequality worsens and the global population swells.

Finally, feelings of insecurity can push people quickly into taking actions that are harmful to the social good even in more developed states. The 2001-2002 period was an anxious time in the Washington, D.C., metropolitan area. In addition to constant concern about another large-scale terrorist attack, smaller-scale terrorism in the form of anthrax mailings and the previously mentioned sniper attacks generated worry for the people of the region. However, the minute risk level for any one individual did not keep people from seeking preventive drugs for anthrax even in unaffected parts of the country (Belongia *et al.* 2005) or from avoiding their normal contributions to daily commerce (Schulden *et al.* 2006). Acts of violence on Muslims in the U.S. following 9/11 as well as looting and violence after disasters like Hurricane Katrina further illustrate the negative implications of fear and insecurity even in the wealthiest of states.

Defining Human Security

As mentioned earlier, the idea of "human security" flowed directly from a renewed consideration of the meaning of security that took place primarily in the 1980s and early 1990s. Bajpai (2003) discerns the contemporary origins of the human security concept in the attention drawn to the subjects of individual safety and well-being by economists and multinational commissions in the 1960s and 1970s. Differentiation eventually emerged among such concepts as national security, international security, and global security (Haftendorn 1991), and human security would recognize how peace and development had become "inextricably interrelated" (Nef 1999).

Broadly construed, human security refers to individual safety, well-being, and freedom from threats. This conceptualization is not uniformly accepted, however. Despite strong advocacy by the United Nations and others in the intergovernmental community for human security in recent years, the idea remains a divisive one. The following elements compose the still definitive UNDP formulation of human security: economic security, food security, health security, environmental security, personal security, community security, and political security (United Nations Development Program 1994). Several authors have proposed alternative components or definitions of human security, however (see Table 1). Not incorporated in the typical history of the human security concept are the works of Abraham Maslow (1943, 1970) and his theory concerning the hierarchy of basic human needs, which includes consideration of the various forms of safety or security important to the individual. "Safety needs" comprise the level of needs immediately above the first level of physiological needs in this theory. Maslow (1970)

contends that both children and adults prefer a "safe, orderly, predictable, lawful, organized world" (p. 41).

Table 1. Theorized Compositions of Human Security

Source	Components
Maslow (1943, 1970)	Following the first level of physiological needs are the "safety" needs, which include (1) security; (2) stability; (3) dependency; (4) protection; (5) freedom from fear, from anxiety and chaos; (6) need for structure, order, law, limits; (7) strength in the protector
UNDP (1994)	(1) Economic security, (2) food security, (3) health security, (4) environmental security, (5) personal security, (6) community security, (7) political security
Axworthy (1997)	(1) Absence of military threat, (2) security against economic privation, (3) acceptable quality of life, (4) guarantee of fundamental human rights
Nef (1999)	(1) Environmental, personal, and physical security; (2) economic security; (3) social security; (4) political security; (5) cultural security
Suhrke (1999)	Reduced vulnerability for: (1) victims of war and internal conflicts, (2) those who live close to the subsistence level, and (3) victims of natural disasters
Thomas (1999)	(1) Meeting basic material needs (e.g., food, shelter, education, health care); (2) realization of human dignity (e.g., meaningful participation in community, emancipation from oppressive power structures, personal autonomy, control over one's life)
King and Murray (2001)	(1) Income, (2) health, (3) education, (4) political freedom, (5) democracy
Bajpai (2003)	Security is composed of direct and indirect threats to personal (1) safety and (2) freedom; security is enhanced by (3) norms and (4) institutions (preferably representative and democratized ones)

Some policymakers and academic researchers have declared that the human security policy agenda has "stalled" (Suhrke 2004) due to the difficulties of defining the term – difficulties that stem in part from the conflicting interests of various state and

intergovernmental actors in defining human security (Paris 2001). Paris (2001) proposes another way forward. He recommends using the term "human security" as one element of a four-fold classificatory structure for security studies more broadly. As such, "human security" would be an umbrella term for studies generally focused on the security of societies, groups, and individuals in the face of primarily nonmilitary threats.

Arguments about defining human security often reduce to the question of whether a broad or narrow conceptualization of individual security is more appropriate (Owen 2004; Roberts 2006). While both conceptualizations center on the security of the individual, they differ in their visions of how far beyond traditional national security concerns human security should extend. Narrow versions only extend security a bit, for example by including violent threats. The narrow approach is appealing to policymakers looking for practical and actionable implications of human security, especially if the approach requires little adjustment to existing security policy and infrastructure. Broader versions (like that of the UNDP), on the other hand, go beyond militarized conflict and violence to include other threats to human survival, well-being, and dignity. A central feature of broader approaches is that human security unites or is connected to areas such as development, humanitarian efforts, human rights, and conflict resolution (Ogata and Cels 2003; Axworthy 1997).

Rather than the narrow-versus-broad distinction, Hoogensen and Stuvøy (2006) focus on the differences between "top-down" and "bottom-up" notions of human security. Government policymakers construct top-down definitions of security, while bottom-up definitions have their locus in individual human beings. Opponents of top-down approaches complain that despite a purported focus on protecting the individual

such approaches do not correct for the problems of traditional state-centric views of security. Critics argue that the state typically does not recognize the threat it poses to its own people or recognize that security is highly context dependent and socially constructed (Mohamed Salih 1999; Bellamy and McDonald 2002; Grayson 2003; Hoogensen and Stuvøy 2006).

If human security is as crucial to governance and policymaking as some suggest, pushing the definitional issue is also essential. In particular, the "amorphous" (Thomas and Tow 2002) broad approach to human security, which is favored by many important actors in the intergovernmental community and is considered more conceptually accurate than narrower approaches, requires a firmer foundation. The central question becomes whether it is possible to make human security *both* conceptually accurate and practically applicable.

I propose that achieving both goals requires extending the broad, bottom-up version of human security to its subjective individual roots and rethinking policy implications. For example, embedded in the broad approach is the idea that national security facilitates development, which in turn contributes to national security. This "security-development nexus" (Roberts 2006), or connection between "freedom from fear" and "freedom from want," currently involves underdeveloped causal mechanisms. One could explain this relationship at the state level by claiming that a lack of national security keeps markets from functioning near optimality and that struggling economies cannot spend large sums of money on weapons, diplomacy, etc. However, this nexus also appears to result from causal mechanisms operating at the individual level, with individual perceptions of security serving as the key to the system of relationships.

Feelings of insecurity may create risk aversion that prevents individuals from taking chances in such areas as furthering their education or trying more difficult jobs. An individual's lack of wealth could, in turn, increase feelings of vulnerability and risk aversion.

A crucial point in extending the broad, bottom-up version of human security is that global definitions have only limited utility. Alkire (2004) counted over thirty different definitions of human security a few years ago. Are some definitions of human security better because their creators are smarter, work harder, or have access to knowledge that others do not? Do the definitions build carefully on one another in an incremental way as the prevailing scientific paradigm prescribes? While a grain of truth may reside in each of these suggestions, the more likely explanation is that individuals think about security in different ways, and each author brings a particular self-centered bias to the definitional procedure.

Risk Perception

"Risk" is an idea that combines the potential for harm (i.e., threats, hazards, dangers) with probabilistic uncertainty over whether the conversion to actual harm will occur. We already know a good deal about the subjective nature of risk and the generation of risk perceptions. Early research on risk in the social and behavioral sciences exhibited a bifurcation between "socio-cultural" and "psychometric" approaches. A prominent example of the socio-cultural approach is cultural anthropological research like Douglas' (1992) study of the politicization of dangers. The psychometric approach to risk, on the other hand, has focused on individual-level factors in risk definition and

perception. Behavioral economics research on decision making (see Kahneman 2003) has paralleled this psychometric research in important ways. These two literatures have produced useful information concerning the different cognitive heuristics, biases, and tendencies that are especially apparent under conditions of threat and uncertainty. These cognitive phenomena affect both the perception of risk and actions taken under conditions of risk.

The bifurcation between socio-cultural and psychometric approaches to risk has given way to various synthetic approaches. The "Risk Society" approach (Beck 1992, 1999), for example, takes the position that objective risks do exist but that one must take into account both socio-cultural contexts and individual differences when talking about the definition and perception of risk. Similarly, a summary of the psychometric paradigm says that it "encompasses a theoretical framework that assumes risk is subjectively defined by individuals who may be influenced by a wide array of psychological, social, institutional and cultural factors" (Slovic 2000a, xxiii). The recent study of cross-cultural risk perception has underscored these ideas in showing both differences across cultures and apparently universal cognitive features of risk perception (Renn and Rohrmann 2000). However, such studies typically include only two or three countries and typically do not control for differences in objective risk across countries or respondents.[3] Weighing the results of such studies, Renn and Rohrmann (2000) posit that risk perception is related to four hierarchical "context" levels. The narrowest context is the "heuristics of information processing" level, which is embedded in a "cognitive-affective factors" level,

[3] Some sociological and psychological risk researchers adopt the position that no "objective" risks exist, since risk calculation always involves some sort of theoretical model. While recognizing the subjective side of risk, I am inclined to believe that rates of occurrence and standard probability modeling often can provide information about objective risk.

which is in turn embedded in a "social-political institutions" level. Finally, the social-political institutions context is embedded in the broad "cultural background" context.

Another synthetic line of risk research has examined the ways in which risk undergoes a "social amplification" process, with the media playing an important role (see Kasperson *et al.* 2003). The "social amplification of risk framework" (SARF) describes the dynamic social processes that underlie risk perception and response. Sometimes risks deemed large by experts receive little societal attention, a process called "attenuation," while risks judged low by experts are sometimes subjected to a great deal of sociopolitical concern and activity – the risk "amplification" process. SARF, according to its architects, holds that "risk, risk events, and the characteristics of both become portrayed through various risk signals (images signs, and symbols), which in turn interact with a wide range of psychological, social, institutional, or cultural processes in ways that intensify or attenuate perceptions of risk and its manageability" (Kasperson *et al.* 2003, 15).

A Preliminary Framework for Security Microfoundations

The following questions motivate a framework for understanding the microfoundations of security:

- *What do individuals view as sources of insecurity?* Why do individuals over-estimate certain political risks and under-estimate others? Where applicable, why do views of masses diverge from those of elites? When doing so protects individuals and contributes to the social good, how can governments achieve better alignment between subjective and objective security?

- *What are the origins of security perceptions?* What individual-level (e.g., cognitive, experiential) and environmental (e.g., social, institutional, informational) factors play a role? How do elite (e.g., politicians, media, bureaucrats) communications contribute to these perceptions?
- *What attitudes and behaviors result from perceptions of insecurity?* What factors are important in translating these perceptions into attitudes and behaviors?
- *What are the policy prescriptions for reducing feelings of insecurity and their negative ramifications?* How do governments prevent such ramifications from arising? How do governments resolve harmful collective action problems that spring from subjective insecurity?

Theoretical and Practical Benefits

The first set of theoretical benefits likely to accrue from a fuller research program on the microfoundations of security, based on the foregoing questions, is an expansion and more thorough inspection of the current state of knowledge on risk perception. Researchers have gathered information on topics like perceived risk from various health, environmental, and energy threats (see Slovic 2000a, 2000b). While such research is relevant to public policymaking, it stops far short of exhausting the important topics in the political domain. Furthermore, the risk perception field is one that would benefit greatly from additional research on contextual influences; as mentioned earlier, cross-contextual research has only been conducted in limited ways thus far. Cross-national and

other cross-contextual research would illuminate which types of contextual variables are important and under what conditions.

Additionally, the causal mechanisms for certain findings in the extant risk perceptions literature are either unclear or are subject to strong competition from a number of theories (e.g., the finding that women tend to view threats across the board as higher). An expanded, multi-level research agenda could help sort out and unify causal mechanisms. Finally, the cognitive risk perceptions literature has uncovered evidence that "worldviews" like fatalism, individualism, and egalitarianism are important determinants of risk perception (Slovic 2000b). However, this literature has not really examined certain ideologies (e.g., political ideology, economic ideology), attitudes (e.g., dogmatism, nationalism, patriotism), and identities (e.g., ethnic identity, religious identity) that are central to political analysis. Nor has it fully considered certain features of information processing thought important to politically based cognition like selective attention (Deutsch and Deutsch 1963; Norman 1968), cognitive dissonance (Festinger 1957), or attention to salient information (Entman 1989).

A reverse set of theoretical benefits, of course, is that application of the risk perception model to political phenomena is also likely to enhance our understanding of political processes. Applying an individual security perspective to political issues like globalization, corruption, and terrorism could provide greater explanatory power than current approaches and could provide theoretical coverage of a wide range of political phenomena. The intention is not to reduce all human behavior and interactions to issues of security, but rather to see what types of behavior and interactions a security microfoundations approach could help to explain. In other words, how useful and broadly

applicable would a set of theoretical tools focused on the microfoundations of security be? What kind of explanatory power would they possess?

Yet another anticipated set of theoretical benefits pertains to developing human security as a concept and its implications more completely. One direct and substantial benefit is eliminating some of the ambiguity that surrounds broader notions of human security – ambiguity that stems in no small degree from a lack of information about individual security perceptions and reactions. Additionally, a framework that recognizes the incongruity between objective/expert and mass assessments of risk aims to fill the very gap that critics of the top-down version of security have decried as problematic. Another specific anticipated benefit would be sorting out the connections and causal endogeneity (or reciprocal causation) that plague human security. Individual security is partially a function of international and national security, but the reverse may also be true. Even more importantly, is development a part of human security, a precursor to human security, or a consequence of human security? Perhaps all the above are true. Conversely, how do individual feelings of insecurity contribute to attitudes and behaviors that are harmful to development, human rights, and conflict resolution efforts?

These are not just ivory-tower musings. As discussed earlier, a better comprehension of the microfoundations of security has clear practical implications for policymaking. Keeping individuals physically safe is undoubtedly an imperative of governance, but dealing with *perceptions* of insecurity and their ramifications is also quite important. This objective necessitates a firm understanding of what makes masses and political elites feel unsafe and what they are likely to do under conditions of

perceived insecurity. Also useful would be a better understanding of when and how leaders manipulate feelings of insecurity to achieve their objectives.

Framework Assumptions

The principal assumption underlying this preliminary framework is that a non-negligible proportion of important human behaviors in the polis and the marketplace are based on self-interested security considerations. Stated more strongly, this proportion is considerably larger than previously believed. The reasoning for this assumption is that survival and well-being are primary objectives of human life. Human beings generally prefer a "safe, orderly, predictable, lawful, organized world" (Maslow 1970, 41) because such a world generally facilitates the objectives of survival and well-being. As for the importance of self-interest, the idea of security means little when separated from the interests of the individual, group, state, etc. Security pertains to the interest of some entity in remaining whole in one sense or another, with survival as the extreme and various dimensions of well-being composing broader understandings of security.

The anticipated objections to this claim are similar to those typically lodged against rational choice theory. The first anticipated objection to this type of claim is that the social sciences frequently have turned up evidence of altruistic and group-based behaviors or other behaviors that seem to provide utility without enhancing either an individual's bank account or security. These findings of other-regarding behavior (e.g., Sears *et al.* 1980; Sears and Funk 1990) include the economic voting literature, which shows a much stronger linkage between vote choice and macroeconomic conditions than between vote choice and individual economic conditions, particularly in the U.S. (see

Lewis-Beck and Stegmaier 2000). A number of different approaches are available for responding to such an objection. One approach is to acknowledge that human beings are complex organisms that interact to create complex societies. Consequently, no single motivating force (e.g., security) is sufficient to describe more than a miniscule proportion of individual and social behavior.

Other approaches, on the other hand, emphasize how seemingly other-regarding behaviors appear self-interested if one looks through the appropriate lenses, though such approaches at times produce hypotheses that are not falsifiable. Many of the claims of evolutionary biology and of the evolutionary social sciences (see Laland and Brown 2002), for example, adopt such an approach. The idea of "inclusive fitness" (Hamilton 1964) or "kin selection" theory (Maynard Smith 1964), which intends to explain altruism based on genetic relatedness, has been called a foundational idea for modern evolutionary thought (Cosmides and Tooby 1987). Evolutionary theorists also have attempted to explain social behavior that extends beyond familial ties. Evolutionary psychology provides an explanation in the form of evolutionary adaptations for social behavior and group living (Cosmides and Tooby 1992). Evolutionary game theory approaches also provide some guidance, showing that a communal-sharing norm may emerge from autonomous interactions of adaptive and profit-seeking individuals (Kameda *et al.* 2003). Most prominently in political science, Axelrod (1984) demonstrated that reciprocity and cooperation could emerge as an evolutionary stable strategy. Cultural group selection (see Boyd and Richerson 1985), another approach, proposes that groups of individuals are evolutionarily selected based on particular culturally learned ideas or behaviors. For example, social norms, contracts, and institutions that promote other-focused behavior

within the group may permit such groups to prosper. A troubling, though intuitively and empirically appealing, implication of this theory is the selection of genetic predispositions for in-group altruism and out-group hostility (Richerson and Boyd 1998).

Regardless of which kind of existing approach one finds most persuasive, the framework assumption concerning the prevalence of self-interested security-based behaviors is a testable one that can be reexamined based on empirical tests of the framework. In some ways, the successfulness of the framework in explaining empirical phenomena is a direct test of this assumption. As for altruism-type objections, we can observe how often individuals incorporate ingroup or outgroup evaluations into their security perceptions and calculations. We can also observe how frequently attitudes like concern for the environment or for the well-being of others are associated with security attitudes. After all, a community with fewer pathogens and fewer unhappy, desperate individuals is a safer place to live.

Another anticipated objection, again also lodged against rational choice theory, is that cognitive and informational limitations prevent people from acting in truly self-interested ways. This is where a framework for understanding the microfoundations of security parts ways with "purer" forms of rational choice theory, which tend to be more productive in high-information environments with elite players whose interests are clear. A secondary assumption of the framework is that behavior in this domain is "boundedly" or "intendedly" rational (see Conlisk 1996; Jones 1999). Rather than assuming high informational and cognitive processing requirements, we merely assume that people want to assess threats accurately so as to devote appropriate resources to them but often are unable to do so due to informational and cognitive limitations. This secondary

assumption, too, is a testable one, and the extant empirical support is strong. People frequently use heuristics (i.e., informational shortcuts or rules of thumb) or exhibit biases in making decisions with regard to conditions of risk or uncertainty (see Rohrmann and Renn 2000; Slovic 2000a; Kahneman 2003).

A final assumption underlying this framework is that empirical research will be useful in defining the microfoundations of security. What is being advocated here is a largely empirical, scientific approach for answering these questions. The attitudes, opinions, and beliefs of individuals that pertain to risk and security can be elicited from individuals with appropriate questions. The security-based behaviors of individuals are also observable. Furthermore, perceptions of security are, in part, a function of the actions, messages, and rules that flow from government – which are observable. As always, such efforts will involve some degree of error, but a broader research agenda carried out by a community of researchers using different approaches would generate more accurate assessments. While the proposed framework recognizes the importance of context, it eschews many of the elements of a pure constructivist approach. Various contexts seem to matter for individual security, but these contexts – informational patterns, environmental influences, topical areas, etc. – can all be converted into variables. Non-empirical work on risk and security informs the testing and evaluation of causal mechanisms, but the belief here is that features of individual perception are identifiable using empirical methods. The fact that security is not a constant across individuals does not negate the usefulness of empirical approaches to study. Inferential methods permit the identification of patterns and allow us to discern the ways in which context matters.

Framework Components

The risk perception literature is a starting point for building a framework for the microfoundations of security. Risk perception is about evaluating *threats* and uncertainty. Previously identified biases, heuristics, and cognitive tendencies may hold across an even broader range of phenomena and situations than those already studied. For example, a standard finding is that more vulnerable groups like women, racial minorities, the less educated, and the less wealthy (see Slovic 2000b; Slovic *et al.* 2000) tend to inflate risk perceptions beyond any observed increase in actual risk. This finding is consistent with findings that voluntariness and controllability (Fischhoff *et al.* 2000) are crucial components of risk perceptions. This finding is further consistent with theorizing about the importance of the power-relationship and identity aspects of human security (Hoogensen and Stuvøy 2006). Also worth exploring is whether such patterns are more focused on clearly self-interested concerns or on more social ones, as evaluations of community well-being may be a heuristic for projecting an individual's own security. In line with suggestions made by Bajpai (2003, 2004), a framework for individual assessments of security should also incorporate *capabilities*. More specifically, factors that mitigate or provide a buffer against threats should enter individual security considerations. For example, wealth can serve as a buffer against a variety of threats – from health risks to criminal acts.

Orientations toward insecurity and approaches for dealing with insecurity constitute another major component of the preliminary framework. The previously

mentioned "worldviews" in the risk perception literature fall into this broader category. These orientations and approaches guide which information about threats an individual selects from the environment and how that information is processed. For example, a person who uses worry as a means of coping with threats may very actively seek out information about threats, while a person with a negative view of human nature may seek and process information about human-based threats using this orientation as a guide. Blame-shifting or blame-assignment is another example of a mechanism for coping with insecurity. A substantial body of research has found that threats increase intolerance, prejudice, ethnocentrism, and xenophobia (see Huddy *et al.* 2005). Attitudes toward out-groups become negative and often violent. Focusing on the comforts of tradition and routine is yet another example of an approach for dealing with feelings of insecurity. People relying on this mechanism will tend to see threats in change.

An *individual's informational characteristics* also matter for security perceptions. Information cannot easily change durable features like an individual's orientations or approaches toward insecurity, but individual informational characteristics – like exposure to certain kinds of information, the sources and volume of information sought, information processing capacity, and experiences – should influence individual assessments of risk. For example, an individual's experiences may serve as a primary resource for evaluating threats – sometimes leading to inflation of threat perceptions and sometimes leading to underestimation. An individual's exposure to "focusing events" tied to threats also may shape perceptions of those particular threats. Additionally, individuals with different social information networks may be exposed to very different messages about the nature and extent of threats.

Environmental patterns constitute a final, broad component of the preliminary framework. Individual perceptions of security are in part the product of dynamic interaction between people and their environments. Information patterns are the first example of relevant environmental influences, as they affect what information an individual can choose from in forming perceptions. The types and amounts of information available, the informational flows produced by institutions, and the constraints placed on certain types of information vary by context. The frames and emphases given to specific threats by elites are widely variable based on one's context, as well. The idea behind "securitization" is that the term "security" is a rhetorical and agenda-setting tool. Labeling an issue as a "security" issue gives it a special status on the public agenda and hands it over to the policy apparatuses and policymakers that typically deal with security issues (Buzan, Wæver, and Wilde 1997). Furthermore, issues labeled as "security" issues lend themselves well to symbolic manipulation. Politicians often are adept at using symbols to reassure citizens and make them "quiescent," or passively acceptant, of particular policies (Edelman 1960, 1967; Stone 2002).

Aggregate levels of instability and uncertainty are a second example of relevant environmental influences. Assessment of security is largely an exercise in projecting and forecasting, which introduces a strong element of uncertainty. Furthermore, uncertainty is "ubiquitous, consequential, and ineradicable in political life" (Cioffi-Revilla 1998, 3), a significant observation as we tie perceptions of security to the more political notion of human security. The institutions of governance can reduce uncertainty by patterning interactions and can spread out the costs of harmful events, while the political arena is a venue for dueling forecasts and arguments about uncertain cause-and-effect relationships.

Political behavior often depends on a joint consideration of threat and uncertainty. Thomas Jefferson explicitly recognized this confluence of threat and uncertainty in the text of the U.S. Declaration of Independence: "Prudence, indeed, will dictate that Governments long established should not be changed for light and transient causes; and accordingly all experience hath shewn, that mankind are more disposed to suffer, while evils are sufferable, than to right themselves by abolishing the forms to which they are accustomed." In other words, certain threats and suffering may be tolerable so long as they are accompanied by a particular degree of predictability.

Norms constitute a third example of relevant environmental influences. The prevalence of particular approaches toward insecurity may influence individual security perceptions. A norm of mistrust, for example, may prejudice individuals toward perceiving threats from other people. In terms of reactions to uncertainty, Hofstede and Hofstede (2005) find substantial cross-cultural differences in "uncertainty avoidance" or tolerance of ambiguity. Uncertainty avoidance may determine whether the default reaction is projecting high or low threat under conditions of uncertainty.

Summary and Discussion

A better understanding of the microfoundations of security is an imperative of governance in that protecting citizens from threats both perceived and real is a core purpose of government. The improved policymaking that may result from such knowledge serves humanitarian aims and the goal of limiting negative consequences of individual insecurity. The emphasis placed on human security by the United Nations and other international actors and the challenges posed by a rapidly changing world also call

for exploring the microfoundations of security. Enhanced understanding can provide policymakers with vital information for supporting political and economic development, reducing internal and external conflict, improving disaster preparedness and response, and overcoming collective action problems in the face of risk.

Empirical research guided by strong theory also has the potential to address problems associated with the definition and articulation of human security, as well as the implementation of human security initiatives. Broader versions of the human security concept, like those advocated by the United Nations, have met substantial criticism, and a lack of knowledge about the microfoundations of security is a prime suspect for these problems. We need to comprehend what individuals view as sources of insecurity and why. In so doing, we can reduce conceptual ambiguity, increase analytical utility, and produce clear policy implications.

Students of risk perception and of decision making under conditions of risk and uncertainty have produced knowledge relevant to the microfoundations of security. These literatures are useful but require a theoretical expansion of concepts beyond risk and an extension into new political domains in order to provide a solid foundation for understanding individual security and for developing practical approaches to human security. Integrating the insights from the risk perception and human security models can contribute to building an even more useful body of knowledge about the microfoundations of security.

An underlying assumption of a framework for the microfoundations of security is that security-based evaluations are a very important part of political life. While the idea of security assumes self-interest, the extent of self-interested behavior and the extent to

which other-regarding behavior is actually self-interested are both testable questions embedded in the framework. Boundedly rational assumptions seem appropriate given previous related research, but the success of the framework as a whole is essentially a test of these assumptions, as well.

This chapter has proposed a number of important components for the preliminary construction of a security microfoundations framework. The types of biases, heuristics, and cognitive tendencies previously identified with regard to the evaluation of threats and conditions of uncertainty are crucial, as are the capabilities individuals believe they possess for warding off threats. Additionally important are the orientations and approaches individuals use for dealing with insecurity and the individual informational characteristics that govern the intake and processing of information about threats. Environmental patterns, too, influence individual assessments of security. Chief among these patterns are informational flows, instability and uncertainty, and norms. The major components outlined here roughly conform to Renn and Rohrmann's (2000) suggestion of thinking in terms of multiple "context levels" of risk perception.

Political researchers have begun examining individual perceptions of security, particularly with regard to issues like terrorism and disaster management. However, these efforts have neither been guided by a unifying theoretical framework nor have they aimed explicitly at improved comprehension of human security. The U.S. Department of Homeland Security has a Center of Excellence for the Study of Terrorism and Responses to Terrorism (START) that conducts research on topics germane to individual perceptions of security. Other researchers have also explored security perceptions and the implications for governance in areas such as: the relationship between perceived threat

from terrorism and support for civil liberties (Davis and Silver 2004), the implications of terror threats perceived as either personal or national in character (Huddy *et al.* 2002), and the differential implications of fear and anxiety for antiterrorism policies (Huddy *et al.* 2005). Researchers have also examined communication-based aspects of security perceptions like media framing of terror issues (Norris *et al.* 2003), likely citizen reactions upon discovering the veracity of fear-based messages provided by government (Lupia and Menning 2005), and the factors affecting whether individuals would evacuate if warned of a significant threat (Silver and Burton 2006).

Empirical testing is vital to assessment of the framework. As mentioned earlier, the preliminary framework is subject to revision based on empirical findings, including reassessment of the assumptions underlying the framework. This research will supply information about general tendencies in the face of threat and uncertainty, but it will also provide details concerning the importance of context and contingencies in generating security perceptions. Continued theoretical development in this area is also vital. While this chapter has proposed a set of relationships as they relate to the generation of security perceptions, less defined are the factors important in translating security perceptions into action.

CHAPTER 2

ATTITUDES TOWARD GLOBALIZATION

Introduction

Many elites, particularly in advanced economies, view globalization as a positive collection of trends. Economists tout the increased efficiency and overall welfare that result from trade liberalization and freer migration of labor. Social and political leaders praise the multiculturalism, tolerance, and diversity that can result from greater global interconnectedness. Political scientists see the diffusion of liberal democratic institutions and values as well as reduced conflict due to the existence of shared interests.

Not everyone agrees with this rosy view of globalization. The forces of globalization have unleashed conflict both within states and across state lines. Opposition to globalization has manifested itself via protests, riots, and militant behavior. Globalization, rightly or wrongly, has been blamed for religious extremism, terrorism, and serious political conflict. Concentration of wealth is yet another malady prominently associated with globalization, as are environmental ills and pandemic. Certainly, messages from some elites – many of them in the "developing" world – emphasize such negative consequences. Studies of mass attitudes have noted that masses often are unimpressed with globalization, as well (see Herrmann, Tetlock, and Diascro 2001; Mayda and Rodrik 2005; Scheve and Slaughter 2006).

Given dueling perspectives and how "globalization" is many different things to many people, the costs and benefits of globalization as a whole are neither entirely clear nor imminently calculable. In the U.S., the severely under-informed anti-globalization protestor is an indelible icon of media coverage and is emblematic of the topic's complexity. Understandably, a good deal of ambiguity remains concerning the sources of support for and opposition to globalization. The standard political economy approach for

explaining attitudes toward globalization, which relies on a combination of rational choice assumptions and theories of international trade, is persuasive in some ways. The informational and cognitive requirements of that approach and the complexity of the topic suggest that much of the story remains untold, however. We have heard about phenomena associated with globalization like the erosion of identity and culture, but we are short on empirical tests of particular mechanisms explaining how or why globalization is a source of worry for some people. Alternatively, we have little evidence about why other people adopt pro-globalization attitudes and exhibit little worry. Having such information would allow us better to predict where support for globalization will be strongest and where opposition is likely to emerge. Such information also would facilitate more productive normative discussions about the desirability of globalization and more effective policies for dealing with citizen unease.

With such goals in mind, I propose thinking about individual attitudes toward globalization in terms of individual security. Such an approach brings economic and non-economic explanations of attitudes toward globalization under a single comprehensive umbrella, which is perhaps more complex in terms of the set of predictions but is less complex from the perspective of what is expected from the individual actor. Such an approach further allows globalization attitudes to serve as a fertile testing ground for better understanding security perceptions. Beyond the integrated theoretical framework, this analysis makes a number of other contributions to our understanding of attitudes toward globalization. These other contributions include consideration of broader notions of globalization, the use of under-utilized and more recent cross-national data, multilevel

statistical modeling, and attempts to sort out the true nature of education's impact on attitudes toward globalization.

The multilevel statistical analysis provides evidence that the lens of individual security is a useful tool for understanding attitudes toward globalization. In particular, these attitudes are a function of: assessments of threats, capabilities, and uncertainty; approaches for dealing with insecurity and orientations toward insecurity; informational characteristics of the individual; and environmental patterns and processes. This security microfoundations approach, built on lesser informational and cognitive requirements, tells a more comprehensive story than the standard political economy approach to understanding attitudes toward globalization.

Attitudes toward Globalization

The bulk of the empirical research on attitudes toward globalization has examined attitudes toward trade or immigration, with a distinction typically made between "economic" and "non-economic" predictors. The theoretical foundation for causal arguments made by political economists is the idea of comparative advantage, with such international trade theories as the Heckscher-Ohlin model (Ohlin 1933; Leamer 1995) and the Ricardo-Viner (or specific-factors) model generating predictions. Political economy arguments build on rational choice assumptions so that personal preferences are determined by narrowly self-interested calculations that take into account the impact of trade or immigration on the individual's personal economic welfare.

Comparative advantage has wage and employment implications based on the relative abundance of factors of production (e.g., skilled vs. unskilled labor) in a country.

These factors are either mobile across sectors (per Heckscher-Ohlin assumptions) or are immobile or partly immobile within particular industries (per Ricardo-Viner assumptions). Factor incomes vary either by the type of factor (i.e., factor endowments) in the former view or by the industry of employment (i.e., specific factors) in the latter. Overall, the literature seems to produce consistent support for such models with regard to trade (Scheve and Slaughter 2001; O'Rourke and Sinnott 2001; Mayda and Rodrik 2005; Scheve and Slaughter 2006) and immigration (Mayda 2005; O'Rourke and Sinnott 2006; Scheve and Slaughter 2006). Beyond factor-based explanations, authors have also claimed that asset ownership influences attitudes toward globalization (Scheve and Slaughter 2001, 2004), that the type of globalization (e.g., foreign direct investment by multinational enterprises) matters for preference formation (Noland 2005), and that individual concerns about state welfare expenditures and redistributive policy are influential particularly with regard to immigration (Wellisch and Walz 1999; Hanson, Scheve, and Slaughter 2007).

Another category of explanations is also economic in nature but deals with apparent "other-regarding" or "sociotropic" (Meehl 1977; Kinder and Kiewiet 1979, 1981) attitudes, which at first glance do not fit well with the individual-level rational choice assumptions. In this view, individuals develop attitudes toward globalization based on their assessments of such phenomena as aggregate unemployment rates or income inequality in their societies. The empirical evidence linking sociotropism and globalization thus far seems weaker than the evidence for direct individual self-interest.

"Non-economic" determinants of attitudes toward globalization (e.g., identities, attitudes, attachments, values, ideologies, worldviews) are included as controls in studies

with a political economy bent. Authors commonly provide only *ad hoc* explanations for these results. Common findings are that intolerance, nationalism, chauvinism, national pride, and patriotism negatively affect attitudes toward trade and immigration.

Some Remaining Questions

Despite the important efforts of authors like the foregoing, explanations of attitudes toward globalization remain incomplete. This paper aims to address a few of the principal areas of ambiguity. First, with very few exceptions (e.g., Noland 2005; Wolfe and Mendelsohn 2005), the quantitative empirical literature has not considered broader notions of globalization in the same way as have some non-quantitative researchers. Trade and immigration are important components of globalization, but the "woman on the street" often sees globalization in more general ways. The diffusion of foreign ideas and norms is another component of globalization, as are the greater communicative connectedness and international travel that can lead to such diffusion.

Second, as pointed out by Scheve and Slaughter (2006), the literature lacks coherent theoretical models of the "non-economic" factors that affect attitudes toward globalization. Rough econometric tests suggest that non-economic determinants are substantially more important than economic ones (e.g., Mayda 2005). Additionally, while the findings of the standard political economy approach appear strong, the assumed cognitive and informational requirements are quite burdensome. Do individuals simultaneously and accurately: (1) make calculations based on their particular locations within the economic infrastructure of their respective countries, (2) understand the economic infrastructures of relevant trading partners, (3) project the likely impact of

international trade or immigration on their own livelihoods based on prominent theories of international trade, and (4) develop attitudes strictly in accordance with these calculations? The current state of knowledge about mass decision making strongly throws such propositions into doubt, perhaps even with the use of heuristics.

Third, the econometric tests in the literature often cover only one country like the U.S. (Citrin *et al.* 1997; Dominitz and Manski 1997; Herrmann, Tetlock, and Diascro 2001; Hanson, Scheve, and Slaughter 2007), Great Britain (Scheve and Slaughter 2004), France (Hellwig 2007), or Canada (Wolfe and Mendelsohn 2005). While comparative studies are necessary for untangling macro-level causality, existing cross-country analyses have used less-than-optimal econometric methods. Additionally, nearly all comparative studies have used the same two datasets, the 1995 National Identity module of the International Social Survey Program or the 1995-1997 wave of the World Values Survey.

Finally, the impact that education and information have on attitudes toward globalization remains unclear. Part of the problem is that political economy studies have used education as a proxy for skill level in operationalizing comparative advantage. While some studies have conducted responsible robustness checks of these particular findings (e.g., Scheve and Slaughter 2001; Mayda 2005; Mayda and Rodrik 2005), such studies cannot wholly rule out the possibility that education and sector of employment merely determine how much or what a person learns about globalization.

The Microfoundations of Security

The explanatory approach employed here centers on the idea of the microfoundations of security. In following with the economic understanding of the term "microfoundations," which refers to the microeconomic phenomena that undergird observable macroeconomic phenomena, this approach focuses primarily on security-relevant perceptions, attitudes, and behaviors at the individual level. Such an approach does not preclude consideration of social forces and patterns that influence the individual, however. I propose that attitudes toward globalization – particularly of the less supportive variety – are largely a function of crude, individual-level security assessments. Four categorical components of individual security are included in this analysis. The first category includes the elements of an individual's risk assessment like threats, capabilities for warding off threats, and uncertainty about projections. The second category includes approaches for dealing with insecurity and orientations toward insecurity. The third category includes the individual's informational characteristics. A final category includes the different environmental patterns and processes that can affect individual security perceptions.

The approach being advocated here shares some similarities with the standard political economy model. In particular, thinking about the issue in terms of security invokes images of a mostly self-interested actor. However, the underlying assumption here is that the individual is boundedly or intendedly rational. The individual's security "calculations" need not be accurate or correct from the standpoint of more objective measurement tools. The informational requirements also are much reduced. The

individual needs to know very little about international trade, immigration, and contexts other than her own.

Individual Level

The standard political economy model suggests that individual economic characteristics combine with macroeconomic context to determine the individual's orientation toward features of globalization like trade and immigration. A given individual conducts a cost-benefit analysis that takes into account such items as the individual's relative skills and assets within the domestic economy, comparative advantages and disadvantages with major trading and migration partners, and implications for the welfare state and redistributive policy. The commonly forwarded implication of jointly applying international trade theory and rational choice theory is that high-skilled individuals in national economies with a relative abundance of high-skilled workers (as compared to low-skilled workers) will adopt a more positive orientation toward globalization than will their low-skilled fellow citizens. Conversely, high-skilled individuals in national economies with a relative abundance of low-skilled workers will adopt a more negative orientation toward globalization than will low-skilled workers in such countries.

However, looking at attitudes toward globalization through the lens of individual security perceptions being proposed here produces slightly different predictions. The first hypothesis pertains to an individual's vulnerability. Research on the perception of risk consistently has found that certain groups like women, racial minorities, and the less educated perceive a greater risk from a wide range of threats, regardless of whether such

groups actually are at greater risk (Ferraro 1995; Slovic 2000b). A likely culprit for this pattern of findings is that the relative lack of power and control felt by disadvantaged individuals increases feelings of vulnerability. Such an explanation is consistent with findings about the centrality of voluntariness and controllability in risk perceptions (Fischhoff *et al.* 2000), as well as with theorizing about power-relationship and identity aspects of human security (Hoogensen and Stuvøy 2006).

Cognitive tendencies identified in decision-making research also seem relevant as mechanisms here. The status quo bias, which involves people thinking about alternatives vis-à-vis the current situation and with a heavier weighting for disadvantages (Samuelson and Zeckhauser 1988), would lead vulnerable individuals to project the negatives of globalization as potentially devastating. The margin of error for such individuals is small. Similarly, the availability heuristic (Tversky and Kahneman 1974; Slovic, Fischhoff, and Lichtenstein 1979) means that individuals in more tenuous situations should easily be able to imagine the negative implications of globalization and should evaluate globalization accordingly.

The other side of this vulnerability hypothesis is that individuals who feel less vulnerable can evaluate globalization without giving much consideration to risks. Such assessments need not involve burdensome calculations of comparative advantage, either. Instead, the less vulnerable simply believe they have a buffer against any hardship that could result from globalization-based change (for similar arguments in the U.S. context see Simon 1987; Dominitz and Manski 1997; Herrmann, Tetlock, and Diascro 2001).

Individual security is also partially a function of the collective's security. Perceived threats to the collective (e.g., the social group, community, society) have

negative implications for the individual's safety and well-being. The collective provides protection from potential "outside" enemies, and a healthy collective can generate secondary security benefits (e.g., reduced crime). Perceptions of threats to the collective also should increase feelings of vulnerability, thereby boosting assessments of the threat from globalization. The collective in this instance is the state, since much globalization rhetoric focuses on distinctions between the state and the outside and because the state makes policies that affect globalization. Again, individuals that see their ingroup (i.e., state) as strong also may believe that they have a buffer against potential harm.

Feelings of uncertainty also should reduce support for globalization. Uncertainty can assume multiple guises, including difficulty in projecting future conditions, belief that future conditions may be more fragile and unpredictable, and discomfort with perceived trends and change. In any case, uncertainty should contribute to feelings of vulnerability. Furthermore, individuals that perceive undesirable trends or change may place blame on globalization, which would show up in evaluations of globalization.

The second category of explanatory factors includes approaches for dealing with insecurity and orientations toward insecurity. These factors govern where individuals look for threats and how they assess those threats. Worry – as a form of extreme vigilance – is one approach for dealing with threats and insecurity. Anxious individuals should have a heightened sense of threat from globalization, in part due to an increased risk aversion (see Huddy *et al.* 2005) that could increase concerns about the unknown impacts of globalization.

Individuals may also deal with feelings of insecurity with mechanisms that dampen or redirect these feelings. Shifting responsibility or assigning blame for

outcomes, thus removing the burden from the individual, is an example. Such mechanisms often have elements of group-based behavior, as demonizing outgroups is an effective blame strategy. Demonization should be clearest when the perceived threats are from international actors – the "agents" of globalization. Conversely, strategies that place blame on the individual for his or her fortunes should ease concerns about globalization and the broad forces that characterize it, since the individual ultimately determines his own outcomes.

A more nuanced version of ingroup-outgroup approaches manifests itself at the elite level in isolationism-versus-engagement arguments about foreign policy. Strategic orientations toward the external are based on whether an individual believes that engagement with the outside or isolation from the outside is the better security strategy. This orientation is similar to the distinction between "liberal" and "nationalist" ideologies of political economy (Gilpin 1987) or the distinction between "internationalist" and "isolationist" attitudes (Herrmann, Tetlock, and Diascro 2001). An individual's orientation toward the external acts as a powerful heuristic for political decision making for elites and masses alike. Though unsupported by theory, previous findings that racism, chauvinism, intolerance, patriotism, and nationalism influence attitudes toward globalization (Mayda 2005; Mayda and Rodrik 2005; O'Rourke and Sinnott 2001, 2006) are consistent with ingroup-outgroup approaches for dealing with insecurity. Also consistent with the ingroup-outgroup approach are findings that the erosion of autonomy and identity (Fetzer 2000; Noland 2005) influences attitudes toward immigration and trade. Such erosion has a dual effect as it is a threat posed by the outgroup *and* it

constitutes a threat to the existing security infrastructure for those individuals focused on the safety provided by identification with the ingroup.

Yet another approach for dealing with threats and insecurity is to focus on the comforts of tradition and routine. As with ingroup-emphasizing approaches, a focus on tradition sticks to what is well known rather than seeking broad exposure to outside stimuli. Globalization represents both change and exposure to the outside, which means that individuals who use tradition and routine as an approach for dealing with threats and insecurity will evaluate globalization more negatively.

The individual's informational characteristics compose the third category of explanatory factors. Information contributes to threat definition and may even influence approaches for dealing with insecurity, though the latter are much more durable. Relatively extensive and unfiltered exposure to the outside world should lessen concerns about the outside being dangerous and should produce more positive evaluations of global interconnectedness. On the other hand, negative attitudes toward the information sources providing such exposure should produce less supportive views of globalization by association.

A particularly important source of information is an individual's formal education. Upper-level education, in particular, may expose individuals to information that is approving of globalization (though counter-examples certainly exist). Education also tends to produce information-seeking behavior and more consistent organization of information – as acknowledged by political researchers who use education as a proxy for "political sophistication." Additionally, education may influence approaches for dealing with threats and insecurity. The liberalizing impact of higher education generally

(Erikson, Luttbeg, and Tedin 1991; Zaller 1992) may contribute to favoring an approach of engagement with the outside, which should lead to more positive evaluations of globalization. Finally, in line with Uncertainty Reduction Theory (Berger and Calabrese 1975), greater information should reduce uncertainty, thereby also easing concerns about globalization.

Country Level

The individual does not make assessments or develop approaches and orientations in a vacuum. Individual security is also a matter of adapting to one's environment and processing information from that environment. Consequently, environmental patterns and processes also play a role. Thinking first about threats and capabilities, we should expect that people in countries that have benefited monetarily in a clear way from exchange will have more positive orientations toward globalization. In this case, the broad, easily ascertained monetary benefits of globalization are a means of bolstering the security of the collective. However, this hypothesis requires an assumption that individuals are getting clear signals about sociotropic conditions, perhaps even from elite cues and messages, and are acting accordingly.

Additionally, other people tend to constitute a particularly clear and direct type of threat. Theoretically, everybody benefits in macroeconomic terms from migration, as labor goes to its highest-valued use. However, some poor countries experience "brain drains" and wealthy countries end up footing large social services bills for immigrants as they get settled. Furthermore, many people in wealthier countries have negative reactions to the native job loss that accompanies an influx of immigrants. Such job loss offends

ingroup-focused approaches for dealing with insecurity, and individuals may feel their own jobs are potentially in danger (though the uneducated and unskilled are generally at greatest risk). For all these reasons, the influx of outsiders is viewed as a threat and is a source of less positive views toward globalization.

The non-monetary standard of living in a country is another potential threat or capability. A simple aggregation of the individual-level vulnerability hypothesis would suggest that countries with an aggregate low standard of living would be less supportive of globalization. However, simple aggregation assumes that people are making relative assessments based on conditions in other countries rather than their own – a proposition that is rather demanding from a cognitive and informational perspective.

On the other hand, we observe some elite rhetoric in countries with higher living standards that points to the negative aspects of globalization, such as increased inequality and cultural erosion (for both the developed and developing worlds). After controlling for aggregate monetary benefits, do these messages have an impact on attitudes toward globalization? Conversely, does elite rhetoric focused on the benefits of globalization shift attitudes in developing countries? We may also observe a form of loss aversion in countries with a relatively high standard of living (aside from considerations of wealth and financial benefit): wanting to avoid any threat or uncertainty that could undermine that standard of living. Of course, such individuals would be overlooking the aspects of globalization that may have permitted the higher standard of living in the first place. Due to plausible theoretical conjectures in both directions, this hypothesis remains directionally neutral.

Finally, the prevalence in an environment of particular approaches for dealing with insecurity should affect attitudes toward globalization if we accept that such approaches constitute cultural norms. For example, orientations toward uncertainty should influence attitudes toward globalization and the change it brings. Cultures that are uncomfortable with uncertainty and that cope with it by avoiding or attempting to resolve ambiguity should adopt a less positive view of globalization.

Data and Methods

This study uses individual-level data collected by the Pew Global Attitudes Project between July and October of 2002. The survey was conducted with over 38,000 respondents from a well-diversified mixture of 44 countries in terms of both development and geographical region.[1] Country-level data used in this study comes from multiple different sources, as explained in Appendix A.

I have found no study on attitudes toward globalization that has modeled the multilevel data structure explicitly. A number of other approaches are possible, but all suffer from deficiencies. The shortcomings of single-country studies are a lack of generalizability and an inability to assess system-level impacts. Simply pooling all respondents across countries is problematic because it ignores the impact of macro processes and assumes that no group-level differentiator influences patterns of causality. The use of dichotomous indicator variables for countries is inferior because this mean-shift approach provides no causal mechanisms for the differences. Modeling at only the

[1] The 44 countries are: Angola, Argentina, Bangladesh, Bolivia, Brazil, Bulgaria, Canada, China, Cote d'Ivoire, Czech Republic, Egypt, France, Germany, Ghana, Guatemala, Honduras, India, Indonesia, Italy, Japan, Jordan, Kenya, Lebanon, Mali, Mexico, Nigeria, Pakistan, Peru, the Philippines, Poland, Russia, Senegal, the Slovak Republic, South Africa, South Korea, Tanzania, Turkey, Uganda, Ukraine, the United Kingdom, the United States of America, Uzbekistan, Venezuela, and Vietnam.

aggregate level is perhaps most suspect, since it raises the potential for serious underspecification and problems with inference and ecological fallacy, as well as not allowing for individual-level causality and interpretation. Yet another potential approach is to run two separate regressions – one at the individual level and one at the aggregate level. The shortcomings with this approach are that variation among groups is overstated and that it does not allow for interactions between levels. A final possibility would be to use an individual-level model that includes the group-level variables simply replicated across individuals in each group. This approach ignores group-level variation beyond that explained by the included group-level variables.

This study uses a multilevel model, which is designed to overcome such deficiencies (see Gelman and Hill 2007; Bickel 2007; Rabe-Hesketh and Skrondal 2005; Steenbergen and Jones 2002; Raudenbush and Bryk 2002). Even more importantly, multilevel models correspond most closely to the theory being advanced here, given the importance of both individual assessments and environmental signals or conditions, as well as the potential for interaction between the two. Multilevel models are most effective when the pattern of results is close to the complete pooling (i.e., ignoring group-level variation) scenario (Gelman and Hill 2007), and these data meet that condition, as well.

The main dependent variable for the analyses is a *Globalization index*. This variable is a composite of attitudes toward interstate trade and business ties; interstate availability of products; interstate travel and communication; interstate spread of movies, television, and music; and overall interstate connectedness.[2] Pew asked to what extent the

[2] Factor analysis using a principal axis factoring extraction method for these five base measures provides an initial eigenvalue of 2.521, with the dimension accounting for 50.42% of the variance. Variables measuring attitudes toward immigration and toward "globalization" itself are not included in this index due to a complete lack of fit with the former and a desire to avoid connotations attached to the word "globalization"

respondent thought that each of these was a: very good thing, somewhat good, somewhat bad, or a very bad thing. The response options for each question were rescaled to the 0-1 interval and were added together. The final variable is a simple, unweighted mean of the five component measures.[3] See Appendix A for further information about the variables used in this study.

Figure 1 shows the distribution of the dependent variable, with higher values representing more negative views of globalization. The figure shows that responses are strikingly positive overall when questions are posed in a relatively neutral way. This result contradicts findings for specific questions about trade or immigration in the mid- and late-1990s (Scheve and Slaughter 2006), especially when questions referenced policy options or mentioned job loss (Wolfe and Mendelsohn 2005). Pluralities or majorities of respondents tended to favor trade protectionism and immigration restrictions. The oft-used trade question from the 1995 National Identity module of the International Social Survey Program (ISSP) asked whether a respondent's country "should limit the import of foreign products in order to protect its national economy," while the similar question from the 1995-1997 wave of the World Values Survey (WVS) asked the respondent to choose between "let goods be imported if people want to buy them" and "imposing restrictions to protect jobs." The ISSP question on immigration asked whether immigration should be reduced or increased, while the WVS question asked under what conditions immigration should be "permitted." The Pew questions, on the other hand,

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in the case of the latter. The factor pattern or "factor loadings" are: travel and communication (0.690); connectedness (0.668); trade and business ties (0.630); availability of products (0.593); and spread of movies, television, and music (0.497). I avoid using the single globalization question as the dependent variable because the index is likely a more reliable measure (Cronbach's $\alpha = 0.734$) and because interpretation of an ordinal multilevel model is much less clear.

[3] The simple index is nearly perfectly correlated with the factor scores produced by the previous factor analysis.

aimed toward using more neutral language to elicit general affect toward each of the globalization components.

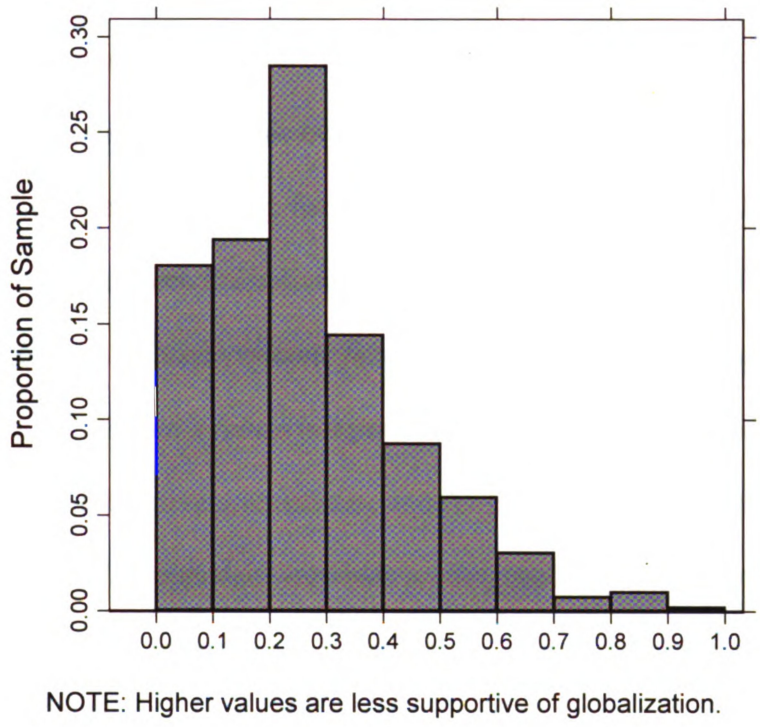


Figure 1. Distribution of Dependent Variable

The first set of independent variables pertains to threats, capabilities, and uncertainty from the individual's perspective. This set of variables includes: *Unemployed*, which is a dichotomous variable indicating unemployed status; *Lacking food*, a variable indicating that an individual did not have enough money at some point during the last year to buy food for her family; *High income*, a dichotomous variable indicating whether an individual was above the observed median income category in her country; and

Female, a dichotomous indicator of being of the female sex – a disadvantaged group in virtually every society. Other independent variables here are directly subjective assessments, including: *Dissatisfaction with income*, which measures the level of satisfaction with current income; *Job availability worse*, an assessment of the extent to which the availability of good-paying jobs has gotten worse over the last five years; and *Macroeconomic situation*, a description of the current state of the country's economy. These last two variables are sociotropic evaluations.

A few of the variables measure future projections and uncertainty. *Personal future trend* is the differential between the individual's assessment of his future situation and his assessment of the present. *Macroeconomic future* is a projection of the country's future economic conditions. *Children's future* is a projection of future conditions for children. All three variables are subjective assessments, and the last two are sociotropic in nature.

The second set of independent variables is composed of variables measuring approaches for dealing with insecurity and orientations toward insecurity. *Worry index* measures the extent to which an individual adopts an anxious orientation toward issues of security.[4] A few other variables measure externalization of threats to specific sources and the placing of blame, including *International corporations*, *International organizations*, and *Immigrants*. Two other variables look at ingroup-outgroup orientations focused on protecting the ingroup culture (*Protect culture*) and claiming superiority of the ingroup culture (*Own country superior*). *Efficacy* measures the extent to which an individual views success as determined more by outside forces (like globalization) or by her own

[4] The worry index consists of assessments of whether the following are problems, with the factor pattern in parentheses: spread of HIV/AIDS (0.565), poor drinking water (0.500), poor quality schools (0.463), crime (0.454), and people leaving for jobs (0.299). As with the dependent variable, the original response options were rescaled to the 0-1 interval, and the composite variable is an unweighted mean of the original five measures.

actions – thereby either shifting blame or placing it squarely on herself. A preference for the stability and comfort of traditional ways is another strategy for coping with uncertainty and insecurity, as measured by *Modern pace* and *Prefer traditional marriage*. *Age* is also included here with the observation that older people tend to evidence a greater dislike for uncertainty and change and tend to prefer traditional ways, due perhaps to their greater risk aversion (see Halek and Eisenhauer 2001).

The final set of independent variables at the individual level measures informational characteristics like information availability and intake and orientations toward information sources. *No international news* is a dichotomous variable indicating individuals who do not watch international news. *No computer* is a variable indicating a lack of computer use. *News influence bad* measures affect toward the news media. Finally, *Education level* is a measure of an individual's highest attained level of education, with the categories standardized across countries.

The model also includes variables at the country level in accordance with the hypotheses proposed earlier. Macroeconomic benefits are operationalized as: *GDP per capita PPP in US$*, a measure of a country's gross domestic product per capita, adjusted for purchasing power parity, in U.S. dollars; and *Net trade in $US billions*, a measure of a country's exports minus imports in billions of U.S. dollars. The measure of net migration of people, *Net migration rate*, is equivalent to the thousands of people entering a country minus the thousands leaving. The measure of the non-financial standard of living in a country is the United Nation's *Life expectancy index*, and the measure of intolerance of ambiguity is Hofstede's *Uncertainty avoidance* (Hofstede and Hofstede 2005). Finally, the model also includes one cross-level interaction to assess the standard political

economy hypothesis. *GDP*income* interacts the individual-level measure *High income* with the state-level measure *GDP per capita PPP in US$*.

Results

The results of a multilevel mixed-effects linear regression appear in Table 2. The table includes coefficients for individual-level variables, country-level variables, and one cross-level interaction. Table 3 displays the variance parameters for those individual-level variables whose slopes were permitted to vary across countries (often called "random effects"). The results provide solid support for the hypotheses. The variables included in the random effects equation were chosen based on the likelihood that their effects would vary considerably across countries due to context and conditions not captured in the specification and based on potential inclusion in cross-level interactions. In each case, the variance parameters for the random slopes and intercepts are several times larger than their standard errors, suggesting that the random specifications are prudent.

Table 2. Multilevel Mixed-Effects Linear Regression on Attitudes toward Globalization

Individual-level Variables	Coefficient	Std. Error	p ≤	95% Confidence Interval	
Unemployed	0.00571	0.00188	0.002	0.00201	0.00940
Lacking food	0.00292	0.00104	0.005	0.00089	0.00495
High income	-0.01515	0.00504	0.003	-0.02502	-0.00528
Female	0.00972	0.00180	0.001	0.00619	0.01325
Dissatisfaction with income	0.00291	0.00073	0.001	0.00149	0.00434
Job availability worse	0.00860	0.00104	0.001	0.00656	0.01065
Macroeconomic situation	0.00247	0.00081	0.002	0.00088	0.00406
Personal future trend	-0.00148	0.00041	0.001	-0.00229	-0.00068
Macroeconomic future	0.00806	0.00098	0.001	0.00614	0.00998
Children's future	0.01063	0.00106	0.001	0.00855	0.01271
Worry index	-0.00213	0.00293	0.467	-0.00788	0.00361
International corporations	0.01625	0.00083	0.001	0.01461	0.01788
International organizations	0.01147	0.00085	0.001	0.00981	0.01314
Immigrants	0.00893	0.00076	0.001	0.00745	0.01042
Protect culture	0.00010	0.00074	0.893	-0.00136	0.00156
Own country superior	-0.00019	0.00075	0.802	-0.00165	0.00128
Efficacy	-0.00412	0.00066	0.001	-0.00541	-0.00283
Modern pace	0.01657	0.00096	0.001	0.01469	0.01844
Prefer traditional marriage	0.00564	0.00100	0.001	0.00368	0.00759
Age	0.00049	0.00007	0.001	0.00036	0.00062
No international news	0.01011	0.00109	0.001	0.00797	0.01224
No computer	0.00777	0.00119	0.001	0.00543	0.01011
News influence bad	0.01609	0.00081	0.001	0.01450	0.01768
Education level	-0.01049	0.00163	0.001	-0.01369	-0.00729
Constant	-0.09199	0.03189	0.004	-0.15449	-0.02950
Country-level Variables					
GDP per capita PPP in US$	-0.000004	0.000001	0.001	-0.000006	-0.000002
Net trade in $US billions	-0.00018	0.00009	0.037	-0.00035	-0.00001
Net migration rate	0.00697	0.00359	0.052	-0.00006	0.01401
Life expectancy index	0.12843	0.04689	0.006	0.03652	0.22034
Uncertainty avoidance	0.00029	0.00037	0.439	-0.00044	0.00102
Cross-level Interaction					
GDP*income	0.0000004	0.0000004	0.263	-0.0000003	0.000001

NOTES: The sample size for the analysis is 30,306 respondents and 42 countries. All tests are two tailed. The log likelihood is 14734.95, with Wald $\chi 2 = 4495.75$ ($p < 0.0001$). As a measure of fit, AIC = -29385.9. The likelihood ratio test between the multilevel model and the equivalent OLS model provides a $\chi 2$ of 2512.54 (10 DF; $p < 0.0001$).

Table 3. Variance Parameters for Variable Slopes and Intercepts

Variable	Variance	Std. Error	95% Confidence Interval	
High income	0.00045	0.00014	0.00024	0.00084
Worry index	0.00027	0.00008	0.00016	0.00047
Education level	0.00008	0.00002	0.00005	0.00014
Constant	0.00520	0.00149	0.00296	0.00911

NOTES: The model was fit using maximum likelihood estimation, with distinct estimation of all variances and covariances of the random effects. The residual variance parameter estimate is 0.02190 (SE = 0.00018; 95% CI = 0.02155 to 0.02225).

A number of results from the model suggest that this is the appropriate estimation method. Statistically significant estimates are obtained at both the individual and country levels, with pre-estimation analysis showing that 13.75% of the variance is at the country level. Furthermore, the likelihood ratio test noted in Table 2 provides evidence that this model is preferable to regular OLS. The results in Table 3 show that the random effects variables do indeed differ in their impacts across countries.

The standard political economy hypothesis calls for an interaction between an individual's skill level and the distribution of skill levels within her country. Evaluation of this hypothesis requires consideration of three coefficients. As an indicator of skill level, individuals with higher relative incomes in their countries (*High income*) have more positive views of globalization in the "main effect." Furthermore, the people of wealthier countries (*GDP per capita*) are also more positively oriented toward globalization. However, the real test is that the cross-level interaction (*GDP*income*) is not statistically significant. The data do not support the view that income has a different effect on attitudes toward globalization in more advanced economies than it does in less advanced economies. Figure 2 provides additional evidence by plotting the post-

estimation country slopes for the individual income variable against the GDP per capita for each country. On the left side of the figure one should see only positive coefficients, meaning that in poorer countries individuals with higher incomes are less supportive of globalization. On the right side the coefficients should be negative, meaning that individuals with higher incomes in wealthier countries are more supportive of globalization than their lower income compatriots. The points in the figure are labeled with their international FIPS codes.

Clearly, many counter-examples to the anticipated pattern exist across the figure. A large proportion of the less-developed economies have negative slopes. Higher income individuals in these countries are *more* supportive of globalization. The average of the slopes on the left side of the figure is about zero. One sees a number of Latin American countries defying the expected pattern, including Peru, Venezuela, Brazil, Mexico, and Argentina. The most likely explanation for this result is the popularity of Dependency Theory and Leftist ideology among the poorer classes in Latin America, both of which blame globalization (more specifically the North and its capitalistic imperialism) for "keeping" these countries in less economically advanced conditions. Another striking feature of the figure is the case of Jordan, which is an extreme outlier in the upper left-hand corner. A conjecture is that higher-income individuals in Jordan benefit from having a more closed society; alternatively, higher-income individuals may be particularly wary of the erosion of their traditional culture. Finally, counter-examples also exist on the right-hand side of the figure. The slopes for the United Kingdom and Japan are in the "wrong" direction, while the slopes for Italy and Germany are very near to zero. In the United Kingdom and Japan, higher-income individuals are less supportive of

globalization, which may be a reflection of greater sensitivity to the negative implications of globalization among higher-income workers. Even if one were to adopt a more probabilistic way of thinking about Figure 2 (r = -0.36), it is clear that the standard political economy model leaves a great deal unexplained.

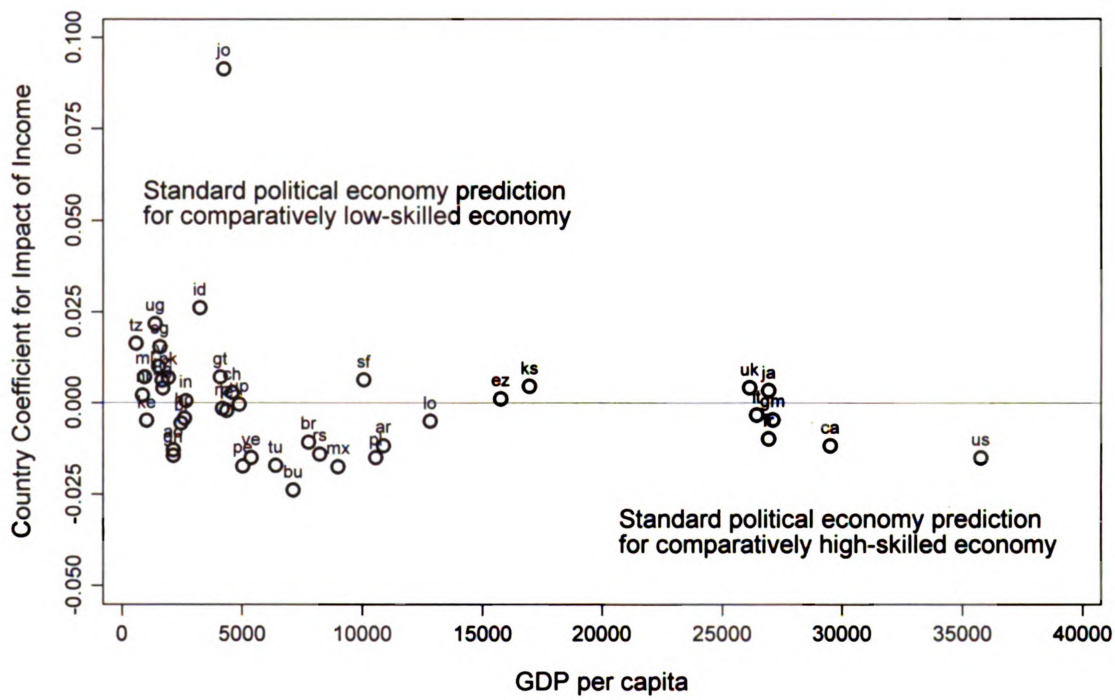


Figure 2. Impact of Income on Attitudes toward Globalization by GDP per Capita

The result for individual income generally fits with the vulnerability hypothesis, which proposed that more threatening individual conditions would negatively influence attitudes toward globalization. Also consistent with this hypothesis are the results showing that being unemployed, lacking money for food, and being female are all associated with less supportive attitudes toward globalization. The more subjective

assessments of threats and capabilities also point in this direction. Greater dissatisfaction with income produces more negative attitudes toward globalization. Sociotropic evaluations, such as belief that job availability has gotten worse and more negative evaluations of the macroeconomic situation, also detract from support for globalization. As hypothesized, uncertainty produces less supportive attitudes toward globalization, as well. More negative assessments of the individual's own future, of the country's future, and of future conditions for children all lead to dimmer views of globalization.[5] In sum, the whole set of variables is supportive of the vulnerability hypothesis.

As for insecurity approaches and orientations, anxiety does not seem to decrease support for globalization. However, the ingroup-outgroup variables mostly performed as expected. More negative assessments of international corporations, international organizations, and immigrants all produce less supportive attitudes toward globalization. Additionally, greater self-efficacy (which places responsibility on the individual) increases support for globalization. The two exceptions are that assessments of one's own culture as superior and a perceived need to protect one's culture from foreign influence fail to achieve statistical significance. Favoring the maintenance of tradition in the form of greater dislike for the modern pace of life, preference for traditional marriage, and being older all contributed to less supportive views of globalization, in line with predictions about the use of tradition and stability as means of countering insecurity fears.

The next set of hypotheses addressed informational characteristics. As anticipated, lesser exposure to outside information (in the form of not watching international news and not using a computer) produces more negative views of

[5] Coding the latter two variables dichotomously so that "don't know" responses take the value of 1 leads to similar results. Therefore, uncertainty works in two ways – in the form of negative views of the future and in the form of not being sure of future conditions.

globalization. Seeing the media as a bad influence also produces lesser support for globalization. Additionally, education – a source of greater information seeking and uncertainty reduction, greater ability to process this information, and perhaps engagement-oriented strategies for dealing with the outside world – generates more positive views of globalization.

At the country level, clear macroeconomic benefits – in the form of wealth production and a more positive trade balance – do indeed have a positive effect on views of globalization. Additionally, in line with theorizing about the threat posed by other people, a greater net migration rate produces more negative views of globalization ($p \leq 0.052$ for a two-tailed test). The hypothesis about the non-financial standard of living in a country was directionally agnostic, and the results show a negative impact on support for globalization. Finally, despite a very strong bivariate correlation, cultural aversion to ambiguity does not have a statistically significant effect on attitudes toward globalization.[6]

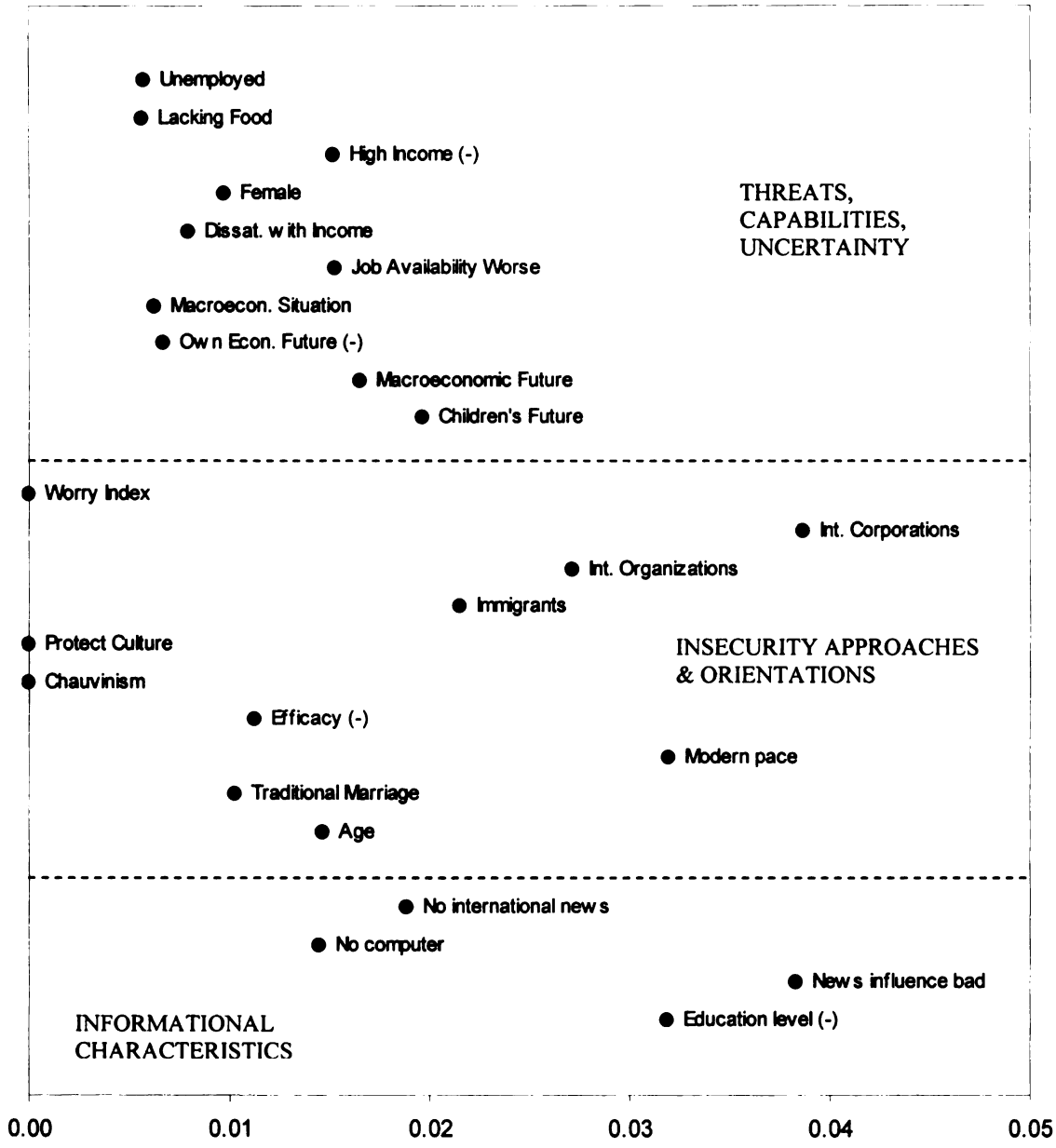
Figure 3 shows relative effect sizes of the independent variables at the individual level. The figure uses the regular coefficients for dichotomous variables and multiplies the coefficients for other variables by two times the standard deviation of the underlying independent variable (see Gelman and Hill 2007, 57). While such comparison does not provide unassailable answers, it does provide some insights, including a better understanding of the pattern and consistency of the results. Nearly all the individual-level variables reach statistical significance. This statistical significance is not too unusual given the sample size, but the fact that the directionality of the results match with the

[6] The lack of significance may be due in part to the lack of specific uncertainty avoidance scores for all the countries included in the analysis. Regional averages were used as proxies for country scores in some cases, thereby decreasing variance.

hypotheses across the board is a noteworthy pattern. Further, the standardized sizes of the impacts are of decent size when compared to the standard deviation of the dependent variable (0.176).

Figure 3 suggests that sociotropic evaluations of threat and uncertainty are more influential than egocentric ones, in line with findings elsewhere about phenomena like economic voting (see Lewis-Beck and Stegmaier 2000). More influential yet are approaches toward insecurity focused on blaming the "agents" of globalization and a preference for traditionalism evidenced by a dislike for the modern pace of life. Finally, education level and negative affect for the news media – an intermediary of globalization of sorts – also have substantial impacts on attitudes toward globalization.

A similar exercise for the country-level variables, which are not directly comparable with the individual-level variables, produces the following standardized impacts: *GDP per capita* (0.076); *Net trade* (0.033); *Net migration rate* (0.028); *Life expectancy index* (0.045); and *Uncertainty avoidance* (0.000). The influence of GDP per capita is substantially larger than the other variables – a particularly interesting result given that the bivariate correlation between the dependent variable and GDP per capita is virtually zero. Controlling for the other factors in the model reveals the relationship. The life expectancy variable also appears to have a relatively large effect, and one that countervails the impact of GDP per capita.



NOTES: The figure shows the absolute values of standardized impacts on the dependent variable. The x-axis is in units of the dependent variable. Independent variables are broken into three categories: (1) threats, capabilities, uncertainty; (2) insecurity approaches and orientations; and (3) informational characteristics. The figure uses regular coefficients for dichotomous variables and multiplies coefficients for other variables by two times the standard deviation of the underlying independent variable. Variables with negative coefficients are marked accordingly. All variables follow the anticipated pattern. Variables with coefficients failing to reach statistical significance are represented with a score of zero.

Figure 3. Absolute Standardized Reductions in Support for Globalization

Robustness checks and diagnostics

The first robustness check uses alternative specifications to further test the standard political economy hypothesis. Some authors have operationalized skill level with education rather than income, which is a variable subject to various measurement problems.[7] Replacing the income-GDP interaction with an education-GDP interaction produces a non-significant coefficient for GDP ($p \leq 0.214$) and a substantially smaller "main" fixed effect size for education level (~-0.006 versus ~-0.010), though a statistically significant interaction ($b = -0.000000487$, $p \leq 0.001$). The signs of the education and interaction coefficients mean that higher GDP boosts globalization support among the well educated, which would accord with the standard political economy hypothesis. However, even using the minimum value of GDP per capita in the data ($580), the combined effect of education and the interaction term still increases support for globalization. Therefore, we do not observe greater education producing a more negative orientation toward globalization in poorer economies; the effect is simply not as large in the supportive direction.

One must also acknowledge the different dependent variable being used here. While the attitudes toward trade variable is highly correlated with the globalization index ($r = 0.679$), we can also separately try making the trade variable dependent.[8] The

[7] Questions about income frequently suffer from respondent refusal to answer. In this data, however, 91% of respondents provided an answer to the income question rather than refusing or saying they did not know. The bigger potential problem is the issue of cross-country comparability. True comparison would require exact income figures (which are almost never available in survey data) and standardizing income by purchasing power parity. Measuring income relatively within a country, as it is here, is beneficial in that it recognizes the importance of relative assessments rather than absolute ones.

[8] While the technically correct approach here and for the following immigration model would be to use an ordinal mixed-effects model, I use a linear model as an approximation due to the relative clarity of the linear model's results.

standard political economy hypothesis also encounters problems here as the income variable and the cross-level interaction term fail to reach statistical significance.

Yet another possible dependent variable, this one not included in the globalization index due to a lack of fit (the correlation with the globalization index is 0.028), measures attitudes toward immigration. The income-GDP interaction term fails to reach statistical significance in a multilevel linear model with attitudes toward immigration dependent, as do several other independent variables. Relatively large effect sizes are observed for attitudes toward immigrants, feelings of ingroup superiority, and belief that the culture must be protected from foreign influence, with an extremely large relative effect size for the worry index.

Another potential concern with the core model is that certain results are endogenous. Though running a two-stage multilevel model is not possible, we can use a regular two-stage linear regression as an approximation. In separate models, the "cleaned" versions of the *Modern pace*, *Children's future*, and *International corporations* variables remain statistically significant in the second-stage regression with *Globalization index* dependent. These variables were identified as ones perhaps most susceptible to endogenous causation.

Several other independent variables relevant to the hypotheses are available in the data, but most would reduce the sample size substantially since they were not asked in all countries. An expanded equation with these other variables has a sample size of 21,341 (as compared to 30,306) with 37 countries represented (as compared to 42). Further bolstering the ingroup-outgroup hypothesis are results showing reduced support for globalization based on a more unfavorable view of the U.S., a belief that the spread of

U.S. customs and ideas is bad, and seeing consumerism as a threat to the ingroup culture. Further supporting the tradition hypothesis is a finding that more traditional views of sexuality (in this case seeing homosexuality as unacceptable) lead to lesser support for globalization. Other results not connected explicitly to previous hypotheses are that linking a growing income gap to globalization and seeing the free market as undesirable both generate less supportive attitudes toward globalization.[9] At the country level, the results show that countries with greater electoral competitiveness have more negative views of globalization. A greater variety of political parties may enhance the likelihood of seeing anti-globalization rhetoric among elites, thereby influencing individual attitudes.

A few other checks are based on suggestions and speculations made in the literature. The importance of a country's unemployment rate as a source of sociotropic evaluation (Davidson *et al.* 2006) is not reflected in the data, nor is the interacted impact of aggregate inequality and an individual's education level on attitudes toward globalization (O'Rourke and Sinnott 2006). Aggregate inequality alone also does not have an effect on attitudes toward globalization. The data provide no evidence that greater social spending (operationalized as either total governmental spending per capita or public healthcare spending) reduces attitudinal differences toward globalization between more- and less-skilled workers (Scheve and Slaughter 2006).

Finally, I have performed a number of diagnostic tests for the core model specification. These tests demonstrate no issues with non-normally distributed errors, non-linear relationships, influential outlying observations, or multicollinearity (the latter

[9] Of note here is that other income gap variables not explicitly linking income inequality to globalization do not achieve statistical significance. One alternative variable simply asks whether the income gap has gotten worse, while the other asks whether a growing income gap is good or bad.

via variance inflation factors for a regular OLS equation). The robustness checks reduce concerns about specification bias, as well. While the OLS equation contains heteroskedastic errors, the use of robust standard errors is not an option in the multilevel equation and the use of weighted least squares is deemed undesirable due to complications with identification and interpretation.

Discussion

Summary

Rather than trade or immigration alone this study has examined globalization as a conglomeration of trends of growing interconnectedness across states. The results demonstrate the importance of using different data sources, different variables, and different questions. Attitudes toward trade and other forms of interconnectedness move together empirically, but immigration is clearly a different animal. People also exhibit particular affect toward the term "globalization" itself. Moreover, responses are far more positive if you characterize globalization using terms like "ties" and "opportunity" and being more "connected" than if terms like "protect," "restrict," and "jobs" are invoked. These positive replies contradict much of the previous research on the topic.

This study has proposed a coherent theoretical approach centered on the microfoundations of security as a means of integrating economic and non-economic determinants of attitudes toward globalization. This approach also offers the ability to integrate individual-level and contextual factors. The cognitive and informational requirements of this boundedly rational approach are much reduced as compared to the rational choice approach. Empirical tests carried out in accordance with this theoretical

approach have explicitly modeled the proposed multilevel causal structure and have done so across dozens of countries rather than just a few.

The examination of individual threats, capabilities, and uncertainty – particularly as perceived by the individual – has shown that vulnerability in many guises influences attitudes toward globalization. Individual evaluations of both egocentric and sociotropic conditions are important indicators of vulnerability. This study has also proposed that approaches for dealing with insecurity and orientations toward insecurity are important elements of the microfoundations of security, thereby providing a theoretical anchor for both the "worldviews" of the risk perception literature and the "non-economic" determinants of the political economy literature on attitudes toward globalization. Especially important are individual security orientations toward outgroups, approaches for assigning blame, and the use of tradition as a source of comfort and protection in the face of threats.

The informational profile of the individual also bears on attitudes toward globalization. This is an under-explored element of such attitudes, but it is one wholly in fitting with an approach focused on individual perceptions of security, which are dependent on informational inputs. Exposure to outside information, positive affect toward outside information sources, and greater education all increase support for globalization in a consistent manner, thus strengthening the argument that what an individual hears and learns about globalization is important. Education may also have secondary effects by reducing feelings of uncertainty and by influencing approaches toward insecurity.

This study also incorporates environmental (i.e., country-level) impacts on attitudes toward globalization, using the lens of individual security as a guide. The fiscal vulnerability or strength of the collective, measured by per capita production and net trade, has an impact similar to individual assessments of macroeconomic strength. However, given the mismatch between individual assessments and the country level measures of economic strength (i.e., low bivariate correlations), the causal mechanism seems to be less direct. Elite messages or a country's conditions may have a more subconscious effect in shifting attitudes in countries. Net migration patterns also influence attitudes toward globalization. Though we cannot say for sure whether this result is due to xenophobia and racism and/or concerns about job loss and social spending, additional analysis does show that overall government spending, per capita government spending, and public healthcare spending do not affect attitudes toward globalization. Therefore, this result appears to reinforce the results pertaining to perceptions of people – especially the "other" – as threats.

Individual Economic Self-Interest?

Many phenomena seem to contradict an assessment that individual economic self-interest is responsible for attitudes toward globalization. In the U.S., one can point to widespread opposition to outsourcing of jobs despite support for the trend by the president's chief financial advisers, a pervasive dislike for trade in places like Iowa that benefit disproportionately from global connectedness, and outrage over toxic toys produced in China.[10] The lesser support for globalization among poorer classes in Latin

[10] On the outsourcing issue see "Treasury Chief Defends Outsourcing of U.S. Work," by Edmund L. Andrews, *New York Times*, March 31, 2004. As for anti-globalization sentiment in Iowa, see "A

America, mentioned earlier, supplies another example. The loss of the Bharatiya Janata Party (BJP) in the 2004 parliamentary elections in India also defies expectations, as the poor (in a less-advanced economy) opposed the party's pro-globalization platform due to a belief that they were not benefiting from the corporate model of globalization. These examples all contradict the story of individual economic self-interest, yet they also seem to contradict the finding in the Pew data of widespread support for more expansive notions of globalization. Clearly, attitudes toward globalization are a complex phenomenon.

Some doubt may remain as to whether the results produced by the individual security approach contradict or supersede the political economy approach. Working in favor of the individual security approach are the more feasible cognitive and informational assumptions and the fit with the whole set of independent variables. The individual security approach produces a consistent pattern of results. Admittedly, this is not a sounding of the death knell for the political economy approach. This study uses a different dependent variable, a different point in time, and a less-than-perfect operationalization of the key income variable.

While it does not appear that context matters in this data in the way proposed by the political economy approach, the results in Figure 2, the magnitude of the random-effects coefficients in Table 3, and the residual variance at the country level all suggest that context *is* important. The effects of the subjective vulnerability and uncertainty variables are more universal across contexts than is the effect of the income variable. Most likely, an individual's relative income within her country does not map extremely

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Globalization Winner Joins in Trade Backlash," by Deborah Solomon and Greg Hitt, *Wall Street Journal*, November 21, 2007.

well to feelings of vulnerability, a conjecture supported by a lower-than-expected correlation between actual income and satisfaction with income ($r = 0.23$).

Additional Questions

No single study can answer the questions being raised here definitively, and this one has engendered a number of new questions. First, as just mentioned, the importance of context merits greater scrutiny. Second, this study has made certain assumptions about the impact of elites on attitudes toward globalization. A direct study of elite messages and actions should prove very useful (as noted by Scheve and Slaughter 2006). Third, the non-results for some variables have spawned additional questions. These data do not provide support for the idea of chauvinism and protectionism as approaches for dealing with insecurity connected to globalization, nor do they suggest that a more negative orientation toward globalization is a straightforward reaction for individuals prone to worrying. Such results further emphasize the point that globalization is a complex phenomenon that is perhaps not very well understood by masses or elites. This apparent ambivalence or confusion is not the case with attitudes toward immigration. Greater worry, chauvinism, and protectionism are all strongly associated with concerns about immigration. The different nature of immigration is clear in how we observe more policy restrictions on the migration of unskilled labor than we see on trade (Bilal *et al.* 2003). Cultural aversion to uncertainty also is not a significant predictor of attitudes toward globalization, but further work may explore whether individual-level measures of ambiguity intolerance do function in such a manner.

Fourth, attitudes toward globalization may exhibit substantial dynamism over time given the importance of information, how quickly globalization can transform societies, and how prominent events can influence these types of evaluations. This study is a snapshot in time and should be compared against new data as it becomes available. Fifth, the result concerning the non-economic standard of living in a country is somewhat puzzling. Though some reasons for such a result were hypothesized, what is the causal mechanism explaining why better living conditions decrease support for globalization? Are masses more susceptible to particular types of elite messages about international conditions based on a country's non-economic living conditions? This would mean receptiveness to anti-globalization rhetoric in countries with higher living standards and receptiveness to pro-globalization messages in countries with lower non-economic living standards. The finding that greater political competitiveness decreases support for globalization bolsters this argument in the case of more developed countries. Some may also attribute this phenomenon to "post-modernism" (Inglehart 1997; Inglehart and Welzel 2005). Such an assertion would be correct in one sense: Higher non-economic living standards remove some worry about daily survival issues, thereby permitting the individual to worry more about threats posed by people and by cultural erosion. In short, higher living standards may contribute to a particular type of xenophobia. Sorting this question out completely will require a study of elite messages in conjunction with the informational characteristics of individuals.

Policy Implications

Concerns about globalization may diversify the demands placed on policymakers in a way that reduces democratic accountability (Hellwig 2007) and could threaten the international pact of "embedded liberalism," which is the compromise between international openness and the domestic welfare state (Wolfe and Mendelsohn 2005). Consequently, policymakers have strong incentives to debate the normative desirability of globalization and to ensure that policies of interconnectedness have the initial and continued support of populations when undertaken.

What do the results of this study mean for policymakers? Importantly, these results show extensive support for globalization. The contrast between this pattern and previously identified patterns is a strong indication that the framing of globalization issues has significant consequences for public support. The results also provide a means for understanding the sources of pro-globalization and anti-globalization positions from an individual security perspective. Therefore, the results may provide information useful for easing globalization-based insecurity, facilitating policy transitions, and preventing dangerous mob reactions. Conversely, the results also provide a guide of sorts for maintaining support for policies of interconnectedness.

As has been claimed with regard to human security in more general and aggregate terms (Roberts 2006), these results show a "security-development nexus" at the individual level. Feelings of insecurity generate an unwillingness to take risks that may be necessary for improved conditions. However, the results also offer the *caveat* that poor living conditions may leave individuals more open to messages about the improvements globalization brings. Additionally, making people feel less vulnerable and less unsure

about the future can decrease concerns about globalization in the developing and developed worlds alike. After all, the flip side of this vicious circle is a virtuous one. Ultimately, policymakers may be able to look to the microfoundations of security studied here for policy approaches for improving "human security" as it relates to globalization.

CHAPTER 3

THE THREAT FROM POLITICAL CORRUPTION

Introduction

They may be flawed and indirect quantifiers, but individual perceptions of public corruption are important because these perceptions affect fundamental political attitudes and behaviors. Such resultant attitudes and behaviors include people's evaluations of government performance and legitimacy (Anderson and Tverdova 2003) and their willingness to comply with laws and to assist in law enforcement efforts (Gardiner 2002; Torgler 2005). These mass evaluations of government in turn serve as obstacles or resources for those who govern.

Mass perceptions have been relatively overlooked in a large literature that deals primarily with the causes and consequences of corruption. Examining the sources of mass perceptions can contribute to answering a number of interrelated questions. Mass evaluations of corruption as a problem or threat constitute a resource for studying the bases of individual insecurity and the impact of political messages about threat. Further, public support for anticorruption programs, often crucial for program success and effectiveness, is typically built on concerns about the negative consequences of corruption. Therefore, how the general public learns about or interprets the threat from public corruption constitutes important information for policymakers interested in building public support. In addition, most corruption research has relied on aggregate measures of elite perceptions, thereby raising questions about validity, sampling biases, and the strength of causal inferences. Examining mass perceptions may help to illuminate the extent of such problems.

In what follows, I first discuss the negative consequences of corruption as posited in the literature and consider the momentum among political elites to fight corruption

over the last decade and a half. Then, I look at the role of perceptions in corruption measurement. A subsequent section introduces hypotheses based primarily on common elements of threat perception from the individual's perspective. Analytical results follow a discussion of the data and methods of analysis. A consideration of the findings and their implications serves to conclude.

The results of statistical analyses, controlling for aggregate estimates of corruption in a country, provide evidence supportive of the proposition that certain security-based attitudes, perceptions, and patterns influence the extent to which an individual views political corruption as a threat. In particular, more negative evaluations of sociotropic conditions, more pessimistic outlooks (especially toward other people), and greater education all increase assessments of political corruption as a threat at the individual level. At the country level, a freer flow of information increases threat assessments, as do the aggregate estimates of corruption. The analyses also produce evidence that individual experiences with bribery are linked to assessments of corruption in developing countries at least. Greater intercommunal conflict and greater national debt also appear to increase assessments of threat from corruption in the sample of developing countries. The analyses also delve into the unusual results for sex and income.

Negative Consequences

Worth noting is that the view of corruption as undermining and inverting the normative purposes of government is not a unanimous one. The "revisionist" perspective has run against the grain in asserting that corruption can have beneficial consequences (see discussions in Tanzi 1998; Lancaster and Montinola 2001). Claims of beneficial

corruption typically hinge on arguments of increased economic efficiency. According to authors in this literature, corruption removes red tape that slows investment and growth (Leff 1964; Huntington 1968), lowers the tax burden (Becker and Stigler 1974), indicates which "customers" of government most value quick service (Lui 1985), directs government projects to the most efficient firms (Beck and Maher 1986; Lien 1986), or facilitates bargaining between the public and private sectors (Shleifer and Vishny 1994). Beyond increasing economic efficiency, corruption also may result in enhanced public support for politicians (Kurer 2001).

In contrast to the revisionist perspective, the bulk of research makes a strong case for the negative consequences of public corruption (see reviews in Bardhan 1997; Tanzi 1998; Jain 2001; Lancaster and Montinola 2001; but especially Rose-Ackerman 1999, 2002, 2006). How corrupt officials spend their illicit proceeds is an important consideration when assessing the consequences of corruption (Nye 1989; Hutchcroft 1997), but the predominant view overall is that corruption primarily benefits the corrupt individual and his or her family, friends, and business associates at the expense of many others.

Researchers have linked public corruption to worsened economic growth via a number of intermediate mechanisms, including effects on investment and economic efficiency. Public corruption decreases rational productive investment domestically (Waterbury 1973; Shleifer and Vishny 1993; Mauro 1995), as well as foreign direct investment (Wei 2000) and net capital inflows (Graf Lambsdorff 2003). Importantly, overall public investment may *increase* as corrupt politicians attempt to augment the flow of rents, but this investment is less productive and shifts funding away from critical areas

such as operations and maintenance (Tanzi and Davoodi 1997) and education (Mauro 1998). Corruption further can reduce economic efficiency through market distortions (Tanzi 1998), including the production of incentives to maintain monopolies and prevent entry (Shleifer and Vishny 1993), though efficiency effects may depend on the distribution of power in patron-client networks within a country (Khan 1996). Yet another avenue for harming economic efficiency and growth is that a corrupt system that makes rent-seeking relatively more profitable will draw talented individuals away from entrepreneurship (Murphy, Shleifer, and Vishny 1991).

Public corruption also purportedly harms the political system and the public financing and procurement systems. Corruption both dampens the effects of social demands (Scott 1972) and spurs on activities like lobbying and bribery that create overall social welfare costs (Krueger 1974). Compounding the problem of social harms, corruption also decreases per capita incomes (for treatment of the endogeneity issue see Kaufmann and Kraay 2002, 2003), increases income inequality and poverty (Gupta, Davoodi, and Alonso-Terme 2002), and hurts the "little guy" by increasing operating expenses for small businesses (Tanzi 1998). In terms of public financing, corruption increases the size of the unofficial economy (Johnson, Kaufmann, and Zoido-Lobatón 1998) and facilitates the operations of organized crime (Rose-Ackerman 1999), thereby contributing to reduced tax revenues (Tanzi and Davoodi 1997) and increased fiscal deficits (Tanzi 1998). Corruption also redirects public funds toward areas like military expenditures and arms procurement in which rent extraction is easier (Gupta, de Mello, and Sharan 2001) and poses an obstacle to important reforms (Rose-Ackerman 1999). Corruption furthermore weakens bureaucratic capacity (Theobald 1990) and undermines

property rights and the legal system as a whole (Tanzi 1998). Finally, though this account is far from exhaustive, we find claims that corruption has negative consequences for the ways that citizens interact with their government and with one another. Seligson (2002a) asserts that direct experiences with corruption erode beliefs in the political system and reduce interpersonal trust, while Anderson and Tverdova (2003) also show negative evaluations of the political system and lesser trust in civil servants resulting from corruption.

The outburst of studies that began in the 1990s detailing the negative consequences of corruption coincided with the work of multilateral organizations and individual donor countries to create programs aimed at reducing corruption. Furthering the connections, many of the individuals involved in these research efforts have been associated in some way with multilateral donor organizations like the World Bank and the International Monetary Fund. Donor countries have begun requiring certain anticorruption standards before supplying funds; a prominent example is the Millennium Challenge Corporation of the U.S., which uses corruption control as one of its indicators for choosing recipient countries. Multilateral funding organizations also began auditing projects for corruption, though much too late according to critics. The spread of non-governmental organizations associated with the anticorruption cause occurred during this time period and contributed to international efforts, as well. The most prominent of these organizations, Transparency International, now has a network of chapters throughout the world. Brown (2006) further notes a decreased tolerance for corruption in international business during this same time period.

Multilateral anticorruption agreements and peer-based compliance mechanisms have constituted the biggest push against corruption in the international governance arena. The first such agreement was the *Inter-American Convention against Corruption*, adopted in March of 1996. A flurry of agreements and standard-setting documents followed over the next eight years (see Appendix B). The United Nations *Convention against Corruption*, adopted in October 2003, has been viewed by many as a capstone to these international efforts.

Corruption Measurement

The definition and measurement of corruption join the causes and consequences of corruption as major topics in the literature. The two greatest difficulties in measurement stem from the lack of a common definition and the concealed nature of corrupt acts (Sík 2002). Reaching a common definition is problematic due to the multi-dimensionality and context-dependence of corruption (Philip 2006). For example, corrupt acts differ in severity, the extent and victims of the damage, and the number of parties involved – among other characteristics. In response to this complexity, Hellman *et al.* (2000) split corrupt acts into three categories: influence, state capture, and administrative corruption. Similarly, authors often make distinctions between "grand" and "petty" corruption and between "active" and "passive" corruption (Langseth 2006). The distribution of opinions concerning the inappropriateness of a particular act can vary from one act to another, and these distributions can vary from one geographic context to another, as well. Heidenheimer (2002) uses the labels "black," "gray," and "white" in describing the tolerance for different types of acts in different contexts. These definitional

issues are substantial enough that the United Nations *Convention against Corruption* avoids a direct definition, instead allowing the acts enumerated within the convention to compose the definition of corruption. This decision was the result of considerable debate.[14]

A common dichotomization of corruption measures splits them into perception-based measures and more "objective" or "proxy" measures not based on perceptions (Sík 2002; Duncan 2006). Though measures in both categories suffer from deficiencies, critics have hammered perception-based measures particularly hard, with the biggest hammer reserved for the most widely used and cited measure – Transparency International's *Corruption Perceptions Index* (see Lancaster and Montinola 2001; Sík 2002; Galtung 2006; Miller 2006; Philip 2006). Despite these criticisms, and despite the paucity of corruption definitions that incorporate perceptions (Johnston 2001), measures that rely primarily on elite perceptions have remained popular.

The study of mass perceptions at the individual level provides leverage in discerning the severity of problems associated with perception-based measurement. First, elite surveys tend to produce a sample biased toward males and relatively wealthy individuals (Galtung 2006) and may include a substantial number of businesspersons who self-select into corrupt activities (Sík 2002). Analysis of a more balanced and representative sample can indicate the extent of the bias problem. Second, elites tend to

[14] Countries proposed and argued for a number of different options for defining "corruption" within the convention. The debate on this issue can be tracked through drafts of the convention. See the following, in chronological order:

- Pages 7-8 of United Nations document A/AC.261/3 (Part I) of Dec. 27, 2001;
- Footnote 24 of A/AC.261/3/Rev.1 of March 26, 2002;
- Footnote 21 of A/AC.261/3/Rev.2 of November 19, 2002;
- Footnotes 32-36 of A/AC.261/3/Rev.3 of Feb. 5, 2003;
- Footnote 30 of A/AC.261/3/Rev.4 of May 12, 2003; and
- Footnote 16 of A/AC.261/Rev.5 of August 15, 2003.

inhabit a different informational environment than the average person on the street. A broader sample may provide insight into the issue of media effects on perceptions and the issue of non-independence of elite observations (see Sík 2002; Miller 2006).

Third, an underlying assumption of perception-based measures seems to be that they reflect direct respondent experiences as well as, perhaps, accurate second-hand information about the experiences of others. However, perceptions may be a function of much more. Analysis at the individual level can help distinguish whether certain predispositions and attitudes influence these perceptions about corruption, while at the same time discerning whether an individual's social network has informational effects. Finally, the use of aggregated perception measures in cross-country studies poses the risk of committing an ecological fallacy if the causal mechanisms operate at least in part at the individual level (Lancaster and Montinola 2001; Seligson 2002b). The analysis of individual-level mass data should aid in evaluating whether the relationships uncovered in aggregate cross-national research are the product of faulty reasoning.

Corruption and Insecurity

The Threat from Political Corruption

This study examines the extent to which respondents believe that "corrupt political leaders" are a "problem" within their countries. The assignment of significant problem status likely involves two considerations – an evaluation that the phenomenon is widespread and an assessment that corruption threatens something of value. The latter condition in particular is a necessary one for problem definition, since widespread phenomena that threaten nothing are rarely considered problematic. The ideas of threat

and harm and risk are common pieces of public policy theories explaining how particular "issues" become "problems" and achieve a place on the public agenda, whether driven by events, media coverage, or issue definition and framing by political elites (see Edelman 1967; Downs 1972; Baumgartner and Jones 1993; Stone 2002; Kingdon 2003). Political corruption constitutes a threat – according to events, the news media, and many political and academic elites worldwide – in that it produces a host of negative consequences. Inasmuch as political corruption prominently threatens the well-being of both individuals and societies, it also merits designation as a problem that needs fixing.

What, then, drives individual perceptions of threat from political corruption? Again, the standard measurement assumption is that assessments of the prevalence and severity of corruption are a function of experience or observation. By extension, perception of *threat* additionally would be a function of experiencing or observing the negative consequences – or harms – of political corruption.

Applying rational choice theory assumptions to the study of patron-client relationships produces a second (though related) kind of explanation. The idea here is that patrons (i.e., political officials) buy support from clients (i.e., voters, other important constituents) using the ill-gotten proceeds of corrupt activities. The resultant prediction is that the beneficiaries of this redistribution of resources in the society would not see political corruption as a threat, since they are better off as a consequence of the corruption. Other individuals, however, are doubly harmed in that they lose in relative terms (since they are not benefiting from the corruption) in addition to enduring the social costs of corruption. Manzetti and Wilson (2007) supply evidence that corrupt political

leaders operating within clientelistic networks can maintain support through the manipulation of government resources.

I instead propose looking at the perceived threat from political corruption through the more comprehensive lens of security microfoundations. The study of "microfoundations" in economic theory establishes how causal mechanisms at the individual level contribute to observed macroeconomic phenomena. Similarly, an approach centering on the microfoundations of security focuses primarily on security-relevant perceptions, attitudes, and behaviors at the individual level. Such an approach does not preclude consideration of social forces and patterns that influence the individual, however. In particular, I propose that assessments of the threat from political corruption are dependent on common risk perception biases and heuristics, approaches and orientations for dealing with insecurity, informational characteristics of the individual, and the patterns and processes in an individual's environment.

The security microfoundations approach is not wholly inconsistent with the observation/experience explanatory approach or the patron-client explanatory approach. Certainly, observations and experiences concerning the negative consequences of corruption are solid indicators of the level of individual insecurity being produced by political corruption. Similarly, benefiting from patron-client networks can provide individual security, while exclusion from these networks can serve to heighten vulnerability. The security microfoundations approach, however, is comprehensive enough to subsume both explanations while also explaining a number of other causal relationships.

Individual-level Hypotheses

Literatures on perceived risk and on decision-making heuristics and biases have revealed patterns in individual risk assessment. For example, a consistent finding in the risk perception literature is that women tend to perceive greater risk than do men across a wide range of potential threats and contexts (see Slovic 2000b; Slovic *et al.* 2000; Sjöberg *et al.* 2000). The less educated (Slovic *et al.* 2000) and racial minorities (Slovic 2000b) also tend to inflate risk perceptions. Similarly, the study of perceived risk of victimization from crime shows that women and less healthy individuals tend to perceive greater risk across a range of potential crimes, though women are less likely to be victimized except in the case of sexual assault (Ferraro 1995). The prototype for low risk perception in the U.S. is a white, middle-aged, relatively wealthy, better-educated, politically conservative male (Slovic 2000b; Finucane *et al.* 2000b). Taken as a whole, these results suggests that vulnerable groups in more precarious situations and with lesser power react to such circumstances with hyper-vigilance and an inflated sense of risks from everywhere. This reaction is a response to a smaller margin for error in everyday life. Such an interpretation also fits with findings that voluntariness and controllability (Fischhoff *et al.* 2000) are crucial components of risk perceptions. We may expect assessments of threat from political corruption to function similarly under this vulnerability hypothesis.

The empirical analysis will also consider a number of issues related to this vulnerability hypothesis. First, are perceptions or actual conditions of vulnerability more important? Second, the economic voting literature (see Lewis-Beck and Stegmaier 2000) suggests that "sociotropic" (Meehl 1977) criteria, which are "other regarding" or socially

focused, are more important as evaluative benchmarks than are individually focused or "egocentric" criteria. Is that the case here, as well? Third, does uncertainty or apprehension about future conditions also contribute to feelings of vulnerability? Finally, could any identified effects that align with the vulnerability hypothesis instead be the result of a different causal mechanism? In particular, could such effects be reflective of the distribution of the negative consequences of corruption or reflective of individuals linking particular conditions to political corruption?

While the literature has identified "worldviews" like fatalism, individualism, and egalitarianism as factors in risk perception (Slovic 2000b), it has not provided a unifying framework for understanding the impact of such factors. I propose that these worldviews fall into a broader category of approaches for dealing with insecurity and orientations toward insecurity. For example, worry – as a form of hyper-vigilance – is one manner of dealing with an uncertain and potentially threatening world. Anxious individuals should express worry about many different types of threats, including the threat posed by political corruption.

An important finding in the risk perception literature is the existence of an "affect heuristic" (Finucane *et al.* 2000a), which means that risk evaluations depend upon how an individual feels toward the source of risk. Accordingly, individuals with negative feelings toward politics or toward the government or prominent governmental leaders should evaluate the threat from corruption based on that negative affect, thereby increasing the perceived threat from corruption.

We should also expect general pessimism to influence evaluations, related as it is to both negative affective mood (Marshall *et al.* 1992) and worry. In other words, some

individuals will see a substantial threat from corruption because their general pre-cognitive orientation toward the world is a negative one. Negative views of human nature (especially *other* humans) are a particularly relevant form of pessimism, given corruption's status as an "immoral" human activity. Xenophobic attitudes and ingroup-focusing tendencies are manifestations of such negative views of human nature, as are attitudes that reflect a belief that people get the bad things they deserve or earn for themselves. Traditional and conservative views also have been associated with pessimism, hostility, and an overall dim view of human nature (Adorno *et al.* 1950; Hoffer 1951; Huntington 1957; McClosky 1958). Individuals who have adopted these types of orientations should see a greater threat from political corruption.

Finally, informational characteristics of the individual also influence assessments of threat. Individuals with access to more information, especially from a greater variety of sources, should receive more of the messages about the negative consequences of corruption and about the ability of a society to function without corrupt transactions. Consequently, such individuals should express greater concern about the threat posed by political corruption, despite this demographic's status as a less vulnerable population.

Country-level Hypotheses

In terms of environmental influences, instability and uncertainty should increase threat assessments of many types. Projecting secure conditions becomes difficult in an unpredictable and ambiguous environment. A competing – and observationally equivalent – causal story is that instability creates conditions ripe for political corruption

(Lederman, Loayza, and Soares 2005) and that the higher level of actual corruption subsequently is reflected in mass threat evaluations.

A second set of environmental influences involves social norms of mistrust. Conflict among social groups promotes mistrust in a society, including the xenophobic and ingroup-focusing attitudes discussed earlier, thereby affecting evaluations of corruption as a threat. Again, however, a competing causal mechanism exists. Social conflict may create instability in a way that opens opportunities for corruption (Treisman 2000; Adserá, Boix, and Payne 2003; Lederman, Loayza, and Soares 2005). Enhanced opportunities would then lead to greater corruption, and accurate perception by the masses would result in evaluations of greater threat.

Informational patterns – and particularly the extent of freely flowing information – constitute a third environmental source of threat perceptions. These informational patterns determine the types of inputs available for an individual's threat assessment. On the one hand, various authors have proposed that freely flowing information should reduce *actual* corruption. Institutional accounts propose that separation of powers (Persson, Roland, and Tabellini 1997), increased political competition (Alt and Lassen 2003), and free and regular elections (Adserá, Boix, and Payne 2003) all enhance transparency and information flows, thereby dissuading corruption or permitting more effective enforcement. More complex accounts claim that the effects of democracy on corruption are nonlinear, with a quadratic function (Montinola and Jackman 2002) or a cubic function (Sung 2004) best explaining the effects. Greater political competition may also have the effect of limiting credible commitments in exchange for bribes (Montinola and Jackman 2002). In terms of transparency, freedom of the press, too, has been

associated with lower aggregate levels of corruption (Brunetti and Weder 2003; Lederman, Loayza, and Soares 2005).

With this third set of patterns the competing hypothesis works in the opposite direction. Regardless of the impact on actual corruption, an increase in freely flowing information should *increase* perceptions of threat given the messages from elites and the financial incentives for the mass media to uncover scandals. Furthermore, greater political competitiveness should increase incentives for political parties to lob accusations of corruption at one another. Closed-information environments allow regimes to reduce perceptions of the problem.

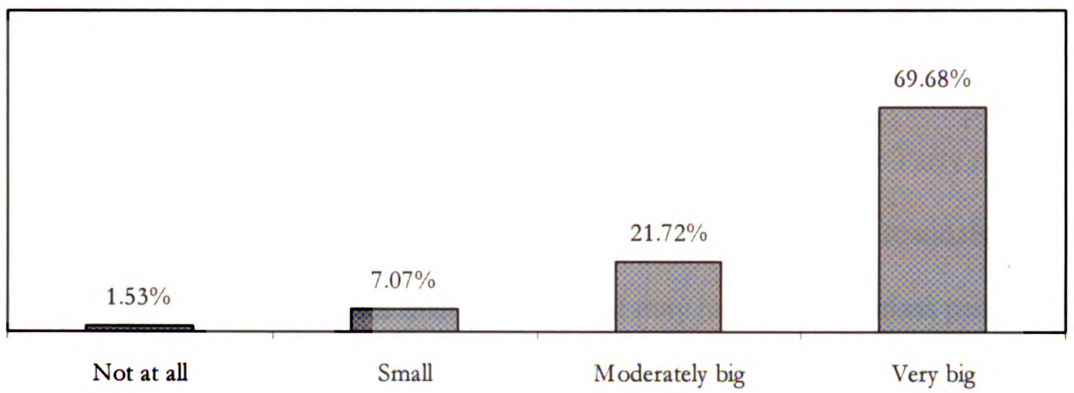
A fourth set of environmental influences involves the negative consequences linked to political corruption. The assumption here is that respondents are able to draw their own conclusions about causality or have received such information from political or media elites. This is really just an indirect form of the informational hypotheses posed at the individual level, this time requiring assumptions about accurate perception and informational processing to bridge the gap. As mentioned earlier, some have proposed that bloated government spending is one consequence of corruption as politicians attempt to increase the flow of rents. The proposed negative consequences for economic growth were also documented earlier.

Finally, an important control in the empirical specification is the elite assessment of corruption in a country. A total lack of correspondence between elite and mass perceptions of corruption would raise serious questions about the validity and substantive importance of elite perception measures.

Data and Methods

The individual-level data used in this study are from the Pew Global Attitudes Project. The Pew Research Center collected data in a well-diversified sample of 44 countries between July and October of 2002.[15] The country-level variables derive from a number of different sources. Please see Appendix C for details on independent variables at both levels. The dependent variable asks to what extent corrupt political leaders are a problem in the respondent's country. Though mass assessments do not necessarily translate into committed support for effective anticorruption programs, Figure 4 demonstrates that claims by political elites that masses do not see a problem with political corruption are dubious at best. Nearly 70% of the pooled cross-national sample sees corruption as a "very big" problem. Further, the pattern of variation across countries (not shown here) directly contradicts the claim that developing countries most in need of anticorruption programs are hampered by apathetic or ignorant populaces.

[15] The 44 countries are: Angola, Argentina, Bangladesh, Bolivia, Brazil, Bulgaria, Canada, China, Cote d'Ivoire, Czech Republic, Egypt, France, Germany, Ghana, Guatemala, Honduras, India, Indonesia, Italy, Japan, Jordan, Kenya, Lebanon, Mali, Mexico, Nigeria, Pakistan, Peru, the Philippines, Poland, Russia, Senegal, the Slovak Republic, South Africa, South Korea, Tanzania, Turkey, Uganda, Ukraine, the United Kingdom, the United States of America, Uzbekistan, Venezuela, and Vietnam.

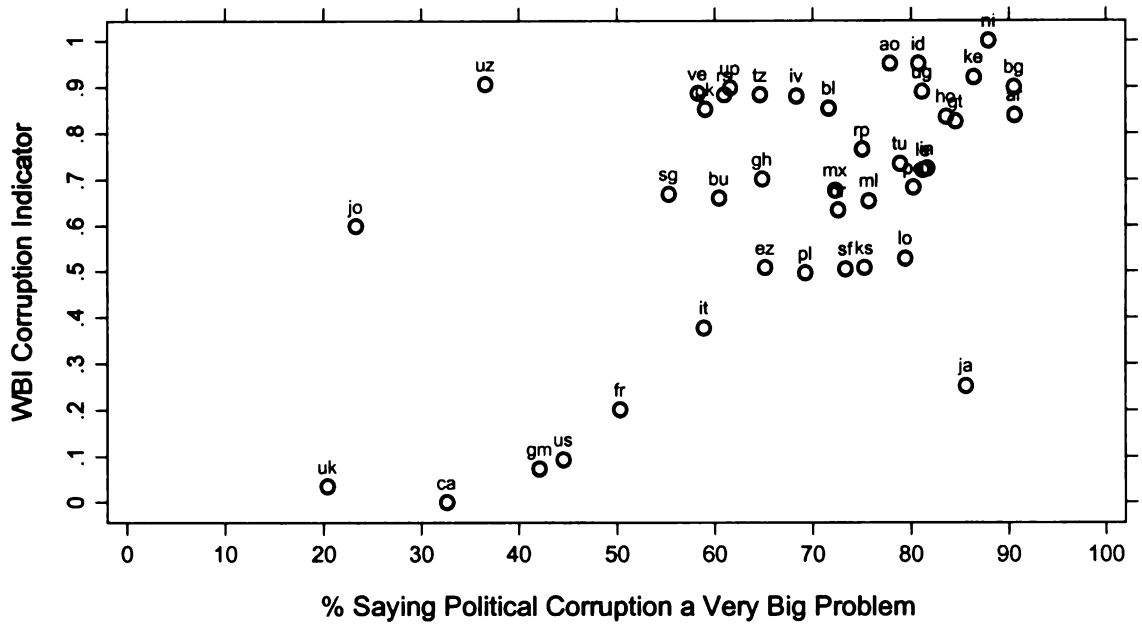


NOTES: This is the distribution of the dependent variable prior to dichotomization for analysis. The sample size for this figure is 32,462. An additional 931 "don't know" responses are added into the "0" category when dichotomizing the variable. The percentage falling into the "very big" category after dichotomization is 67.74%.

Figure 4. Distribution of the Dependent Variable: Political Corruption as a Problem

Figure 5 shows that at the aggregate level mass perceptions track with elite perceptions relatively well ($r = 0.557$). This scatter plot compares aggregated country percentages for the dependent variable (i.e., the percent of the sample falling into the "very big" problem category) against a rescaled version of the World Bank Institute (WBI)'s "Control of Corruption" measure for 2002 (Kaufmann, Kraay, and Mastruzzi 2005). The WBI index is composed primarily of sources that utilize elite perceptions and experiences. While the WBI index also draws from sources that utilize mass household surveys (e.g., Afrobarometer, Latinobarómetro), its composite value correlates rather closely with its constituent parts based on elite perceptions (see Appendix D). The WBI measure is also highly correlated with Transparency International's *Corruption*

Perceptions Index but provides better coverage of countries for the year in question and draws data from a greater number of distinct sources. The clear outliers in Figure 5 are Japan (in the lower right-hand corner) and Jordan and Uzbekistan (in the upper left-hand corner), as indicated by the FIPS 10-4 country code labels. Japan's situation most likely owes to the corruption scandals that have afflicted the Liberal Democratic Party in what has been largely a single-party system in the post-War era; news of these scandals may have had a larger impact on masses than on elites and may have inflated mass perceptions of corruption. Lack of transparency is probably a major factor in the cases of Jordan and Uzbekistan, where masses do not see political corruption as much of a problem. Widespread trust in the government or mass acceptance of corrupt practices could be other contributing factors to such a result. The Pew survey also questioned respondents about the frequency with which they had to provide bribes to public servants in order to get services to which they were entitled. The bribery measure also tracks rather well with the WBI measure at the aggregate level ($r = 0.538$) for a sample limited to developing countries.



NOTES: The World Bank Institute's Control of Corruption measure has been rescaled to the 0-1 interval and has been inverted so that higher values are indicative of more corruption. The mass perception measure on the x-axis is calculated using the Pew Global Attitudes Project data. The bivariate correlation between the two measures is 0.557.

Figure 5. Comparison of Elite and Mass Perceptions of Corruption

As noted earlier, a question asking to what extent political corruption is a "problem" likely prompts two interrelated evaluations from a respondent – the first dealing with how widespread or severe the corruption is and the second dealing with the threat or harm from corruption. The question wording, especially in that it asks about political leaders, points toward "grand" corruption, thereby forestalling certain concerns about respondent differences in defining corruption. The 1995-1997 wave of the World Values Survey (WVS) also asked a question about corruption that may help determine how respondents evaluate such questions. The WVS asked: "How widespread do you think bribe taking and corruption is in this country?" Pooling respondents across

countries and using the appropriate weight, the marginal percentages for valid responses were: 3.6% said almost no public officials were engaged in it, 29.5% said a few public officials, 39.3% said most public officials, and 27.6% said almost all public officials. The timing of the two surveys may explain some of the distributional difference, given the international push for anticorruption programs in the late 1990s and early 2000s. However, the difference also suggests that people evaluate questions about a "problem" or threat differently than a question that asks about how widespread a particular type of corruption is. Bolstering this claim of different evaluations, the correlation at the individual level in the Pew data between assessment of political corruption as a problem and experience with bribery is quite low ($r = 0.046$).

In terms of methodological choices, multilevel econometric modeling allows simultaneous consideration of causal mechanisms within the individual and from environmental influences, which is crucial based on the hypotheses proposed earlier. Multilevel models also calculate more appropriate standard errors at the group level (Gelman and Hill 2007), which is consequential because aggregate corruption studies likely underestimate the standard errors. Given the distributional bunching at one end, dichotomization of the dependent variable seems prudent. Respondents clearly have no qualms about saying that political corruption is a "very big" problem. The dichotomous version of the variable ("very big" problem = 1) ensures a reasonable distribution of cases across categories and avoids computational convergence and interpretation difficulties associated with ordinal multilevel models. Multilevel mixed-effects logistic regression is used as a method appropriate for both the multilevel nature of the hypotheses and the dichotomous dependent variable.

Results

Table 4 presents the results from four different specifications for a multilevel mixed-effects logistic regression on perceived threat from corruption.[16] The first specification listed is the core specification. The vulnerability hypothesis receives mixed support. The female (*Female*) and income (*Highinc*) variables run contrary to the expected direction. Furthermore, being unemployed (*Unemployed status*) and an individual's egocentric evaluation of his present (*Own situation*) and future (*Own future situation*) conditions have no bearing on the dependent variable. However, the sociotropic variables do have statistically significant coefficients in the expected direction. More negative evaluations of present macroeconomic conditions (*Macroeconomic situation*) and future macroeconomic conditions (*Macroeconomic future*) both produce greater perceived threat from corruption. Assessments that the income gap in the country has grown (*Income gap*), as an indicator of concerns about social inequity, also increase the perceived threat from corruption.

However, the actual mechanism relating sociotropic evaluations to threat evaluations about corruption is not entirely clear. A first possibility is that more negative assessments of sociotropic conditions and of corruption are *both* a function of pessimistic orientations toward the world. In this case, pessimism is the real causal factor, though pessimism also could be due to perceived or actual vulnerability – in which case pessimism becomes an intermediary for vulnerability. A second possibility is that subjective sociotropic evaluations of vulnerability are the easiest heuristic for individuals to apply in evaluating the threat from corruption. A third possibility is that the individual

[16] Data were unweighted during the analysis. Despite non-random geographic sampling in some countries, the multilevel statistical model does not permit the application of data weights.

links other problems in the society explicitly to political corruption based on observation, information from social networks, or messages about negative consequences from elites. Regardless of the causal mechanism (though these causal stories need not be mutually exclusive), more objective indicators do not seem to function as well as subjective ones. People's perceptions of vulnerability or of negative consequences are important, including perceptions of future uncertainty.

Approaches and orientations toward insecurity perform as anticipated. Anxiety (*Worry index*) has a particularly powerful effect. Individuals also evaluate the threat from corruption based on affect toward the political system (*Politics a major problem*, *National government*) and its representatives (*National executive*). Furthermore, generalized pessimism (*Dissatisfaction with world*) and pessimism aimed more directly at other people (*Immigration*, *Protect culture*) tend to increase perceived threat from corruption. Blaming the individual (*Efficacy*) does not have an effect opposite that of pessimism aimed at other people, however. Finally, individuals focused on the stability of tradition as a means of dealing with insecurity (*Losing tradition*) also see a larger threat from corruption.

Table 4. Multilevel Mixed-Effects Logistic Regression on Perceived Threat from Corruption

Individual-level Variables	Specification #1 (Core)		Specification #2 (Interaction)	
Female	-0.3266***	(0.0454)	-0.5750**	(0.1919)
High income	0.0738*	(0.0335)	0.0740*	(0.0335)
Unemployed status	0.0256	(0.0561)	0.0256	(0.0561)
Own situation	0.0088	(0.0090)	0.0092	(0.0090)
Macroecon. situation	0.1055***	(0.0143)	0.1057***	(0.0144)
Own future situation	0.0031	(0.0078)	0.0028	(0.0078)
Macroeconomic future	0.0510**	(0.0171)	0.0513**	(0.0171)
Income gap	0.1231***	(0.0223)	0.1231***	(0.0223)
Worry index	1.0455***	(0.0263)	1.0437***	(0.0263)
Politics a major problem	0.4374***	(0.0340)	0.4378***	(0.0340)
National government	0.1125***	(0.0160)	0.1127***	(0.0160)
National executive	0.0774***	(0.0158)	0.0778***	(0.0158)
Dissatisfaction w/world	0.0631**	(0.0202)	0.0624**	(0.0202)
Immigration	0.1520***	(0.0473)	0.1521***	(0.0473)
Protect culture	0.0464***	(0.0125)	0.0462***	(0.0125)
Efficacy	0.0035	(0.0116)	0.0035	(0.0116)
Losing tradition	0.0978***	(0.0186)	0.0971***	(0.0186)
Education	0.0154***	(0.0030)	0.0153***	(0.0031)
Bribery experience				
Constant	-6.8300***	(0.3932)	-6.1502***	(0.6440)
Country-level Variables				
Regime durability	-0.0027	(0.0029)	-0.0028	(0.0028)
Intercommunal conflict	0.0574	(0.0403)	0.0537	(0.0399)
Press freedom	-0.0155*	(0.0064)	-0.0155*	(0.0063)
National debt per capita	0.00002	(0.00001)	0.00003	(0.00001)
Corruption	2.2912***	(0.5733)	2.1443***	(0.5972)
GDP per capita				
Literacy			-0.0069	(0.0050)
Cross-level Interaction				
Literacy*Female			0.0030	(0.0023)

NOTES: Standard errors appear in parentheses. All tests are two tailed. See Table 5 for details. ***$p \leq 0.001$ **$p \leq 0.01$ *$p \leq 0.05$

Table 4. Multilevel Mixed-Effects Logistic Regression on Perceived Threat from Corruption (Continued)

Individual-level Variables	Specification #3 (GDP)		Specification #4 (Bribery)	
Female	-0.3205***	(0.0453)	-0.3325***	(0.0499)
High income	0.0738*	(0.0335)	0.1030**	(0.0380)
Unemployed status	0.0263	(0.0561)	0.0368	(0.0658)
Own situation	0.0090	(0.0090)	0.0141	(0.0099)
Macroecon. situation	0.1059***	(0.0144)	0.1033***	(0.0162)
Own future situation	0.0030	(0.0078)	-0.0002	(0.0086)
Macroeconomic future	0.0506**	(0.0172)	0.0438*	(0.0192)
Income gap	0.1230***	(0.0223)	0.0748**	(0.0249)
Worry index	1.0477***	(0.0263)	1.0414***	(0.0292)
Politics a major problem	0.4389***	(0.0340)	0.4219***	(0.0381)
National government	0.1130***	(0.0160)	0.0869***	(0.0181)
National executive	0.0775***	(0.0158)	0.0536**	(0.0184)
Dissatisfaction w/world	0.0626**	(0.0202)	0.0652**	(0.0222)
Immigration	0.1509***	(0.0473)	0.1710***	(0.0526)
Protect culture	0.0464***	(0.0125)	0.0489***	(0.0144)
Efficacy	0.0033	(0.0116)	-0.0001	(0.0130)
Losing tradition	0.0975***	(0.0186)	0.1064***	(0.0212)
Education	0.0154***	(0.0030)	0.0163***	(0.0032)
Bribery experience			0.0459*	(0.0190)
Constant	-5.2738***	(0.3961)	-6.7678***	(0.5742)
Country-level Variables				
Regime durability	-0.0031	(0.0033)	-0.0073	(0.0076)
Intercommunal conflict	0.0670	(0.0438)	0.0825*	(0.0379)
Press freedom	-0.0066	(0.0060)	-0.0154*	(0.0065)
National debt per capita	0.00003	(0.00002)	0.0002*	(0.0001)
Corruption			2.2049**	(0.8309)
GDP per capita	-0.00005**	(0.00002)		
Literacy				
Cross-level Interaction				
Literacy*Female				

NOTES: Standard errors appear in parentheses. All tests are two tailed. See Table 5 for details. ***$p \leq 0.001$ **$p \leq 0.01$ *$p \leq 0.05$

The patron-client hypothesis receives mixed support. The vulnerability variables contradict the hypothesis that those individuals benefiting from a patron-client network are less likely to see corruption as a problem, since higher income individuals see corruption as *more* of a problem and subjective evaluation of one's own present status has no bearing on the evaluation of corruption as a threat. The distribution of the dependent variable also bodes ill for the patron-client hypothesis. A rather small percentage of respondents overall see political corruption as non-threatening, and that percentage is roughly the same across both developing and developed countries in the sample. The beneficiaries from the patron-client networks would have to be rather few in number and would have to appear rather universally regardless of government type or quality. The variables measuring affect toward government do perform in accordance with the expectations of the patron-client hypothesis, however. Individuals benefiting from a clientelistic network would likely have a more positive orientation toward government and would also not see corruption as much of a problem – though the distribution of the dependent variable remains problematic here, as well.

The information-based hypothesis also receives support in the empirical analysis. Greater education (*Education*), as a proxy for information gathering and processing, increases the perceived threat from corruption. Experiences with bribery (*Bribery experience*) constitute a direct source of information about corruption, as well. Specification #4 in Table 4 tests the hypothesis that experience with bribery increases perceptions of threat from political corruption. The results provide supportive evidence, though this particular question was not asked in more developed countries, thereby

decreasing the number and variety of countries in the sample. Additionally, even a change over the entire range of the bribery variable only increases the probability of seeing corruption as a very big problem by 0.0247 (using the same methodology employed in creating Table 7), a relatively small effect from a substantive point of view.

At the country level, the control for mostly elite assessments of corruption (*Corrupt*) functions as expected by paralleling individual evaluations of the threat from political corruption. However, regime durability (*Durability*), as an indicator of stability, does not have a statistically significant impact on the dependent variable – except in the reduced-sample final specification. The same is true of social norms of mistrust (*Intercommunal conflict)*. The result concerning aggregate informational patterns (*Press Freedom*) favors the interpretation that transparency decreases corruption and provides reassurance to citizens. The idea that social transparency permits the stoking of people's fears about corruption or increases perceptions of the incidence of corruption is not supported.

A series of variables were used in testing whether the negative consequences of corruption are translated into more negative respondent evaluations, either through observation or via messages from elites. The first was based on the assertion that government spending can get out of control as politicians attempt to enhance the flow of rents. However, *National debt per capita* had a statistically significant effect only in the reduced-sample equation. Specification #3 used national productivity (*GDP per capita*) as a measure of the impact of corruption on economic growth. Using this variable necessitated dropping the aggregate corruption measure as a control due to multicollinearity, however. Higher GDP per capita does produce lesser concern when the

corruption control is eliminated (though not otherwise). Military expenditures and total imports were included in equations not shown here, since military expenditures are thought to increase because they lend themselves well to additional corruption and imports are thought to decrease as companies avoid investing in corrupt countries. However, neither variable achieved statistically significant results.

The results from the random-effects portion of the equations appear in Table 5. The impact of the sex variable varies considerably across countries, suggesting that contextual factors condition this relationship with corruption perceptions. Table 5 also contains information about each of the model specifications. These indicators of model performance all suggest that the mixed-effects multilevel model was an appropriate choice for estimation, particularly as compared to regular logistic regression.

Table 5. Random Effects and Estimation Information

Random Effects	**Specification #1 (Core)**	**Specification #2 (Interaction)**	**Specification #3 (GDP)**	**Specification #4 (Bribery)**
Female	0.1910 (0.0403)	0.1737 (0.0430)	0.1903 (0.0406)	0.1843 (0.0440)
Constant	0.5422 (0.0672)	0.5257 (0.0658)	0.5557 (0.0679)	0.5143 (0.0716)
Sex-Constant Correlation	-0.5106 (0.1981)	-0.4862 (0.2184)	-0.3216 (0.2297)	-0.6305 (0.1920)
Estimation Information	**Specification #1 (Core)**	**Specification #2 (Interaction)**	**Specification #3 (GDP)**	**Specification #4 (Bribery)**
Sample Sizes (Countries)	26,311 (40)	26,311 (40)	26,311 (40)	21,463 (33)
Log Likelihood	-13,234.15	-13,232.89	-13,237.55	-10,519.96
Wald χ^2	2,576.79 ($p \leq 0.0001$)	2,578.62 ($p \leq 0.0001$)	2,561.99 ($p \leq 0.0001$)	1,988.89 ($p \leq 0.0001$)
LR Test vs. Logistic Regression	819.49 ($p \leq 0.0001$)	781.06 ($p \leq 0.0001$)	917.79 ($p \leq 0.0001$)	570.05 ($p \leq 0.0001$)

NOTES: Random effects parameters are standard deviations for the first two variables and the correlation between those two variables for the third. Standard errors follow in parentheses. Note that the estimates for the two variables are several times larger than their standard errors.

The results for the female and income variables, which run contrary to a large body of literature on risk perception, are unusual enough to warrant additional analysis. Evidently, considerations other than vulnerability are predominant here. Additional examination of the data provides no evidence that the effect for females (i.e., seeing corruption as less of a threat) is due to informational differences or to stances on "moral" issues. The data do suggest, however, an effect based on a certain percentage of women "trusting the men to run things." The relationship between sex and corruption perception is particularly strong among those individuals preferring or indifferent to traditional marriage roles ($r = 0.097$ as compared to 0.031 for others). If true, one may expect this result to be contingent on environmental factors related to modern ideas about women's rights.

Specification #2 in Table 4 examines whether the sex effect is contingent on literacy in a country. The coefficients for *Literacy* and *Literacy*Female* are not statistically significant by conventional standards. However, the meaningfulness of standard significance tests for interactions in models with categorical dependent variables is a subject of considerable debate (see Norton, Wang, and Ai 2004; Berry and Rubin 2007; Franzese and Kam 2007), as is the issue of appropriate tests for interactions more generally (Brambor, Clark, and Golder 2006). The use of a multilevel model further complicates inferences. Table 6 provides one means of ascertaining the significance of the interaction. The difference between males and females in the predicted probability of saying that corruption is a very big problem is 0.083 when country literacy is at an

observed minimum. The equivalent difference is 0.058 when literacy is at a maximum, meaning that sex differences are smaller in more literate countries, which would fit with the women's rights and liberation story. However, the point estimate of this "difference-in-differences" effect (i.e., 0.083 – 0.058 = 0.025) is substantively small and is unlikely to be statistically significant.

Table 6. Interaction of Sex and Literacy

Sex Value	Literacy Value	Literacy*Sex Value	Predicted Probability
Male (=0)	38.0 (Min.)	0.0	0.801
Female (=1)	38.0 (Min.)	38.0	0.718
Difference at minimum literacy			**0.083**
Male (=0)	99.9 (Max.)	0.0	0.724
Female (=1)	99.9 (Max.)	99.9	0.666
Difference at maximum literacy			**0.058**

NOTES: All other independent variables were set at their mean values.

The income result, on the other hand, fits with an interpretation that individuals with more money have greater concern about the financial implications of corruption, since they have more to lose in absolute terms. Perhaps even more plausible is that higher-income individuals tend to work in white-collar or other industries in which corruption is more easily understood or information about corruption is more plentiful.

Table 7 presents the results of an analysis designed to provide estimated effect sizes for the different hypotheses. This analysis also uses changes in predicted probability for the dependent variable. The analysis shows that more negative evaluations of

sociotropic conditions increases seeing corruption as a very big problem by about 6 percentage points (i.e., a change in probability of 0.0563). Similarly, a more pessimistic outlook (including pessimism about human nature) results in an increase of about 5 percentage points. Even more impressively, negative affect toward the government and its agents produces an increase of about 9 percentage points. Furthermore, greater education results in an increase of about 3 percentage points. At the country level (which is not directly comparable to the individual level), freedom of the press generates an increase of about 7 percentage points, while primarily elite assessments of corruption produce an increase of about 11 percentage points. Of course, these effects are not additive; each is calculated while holding the other variables at their mean values.

Table 7. Changes in Predicted Probabilities by Profile

Profile	Low	High	Difference
Negative sociotropic evaluations	0.6856	0.7419	0.0563
Pessimism	0.6895	0.7410	0.0515
Negative affect	0.6536	0.7395	0.0859
Education	0.6999	0.7255	0.0256
Press freedom	0.7327	0.6626	0.0701
Corruption	0.6720	0.7786	0.1066

NOTES: Predicted probabilities are for the dependent variable taking the value of 1 (as opposed to 0). "Difference" is the absolute difference between the two predicted probabilities for each profile. "Low" values are ½ standard deviation below the mean for all variables of interest, while "high" values are ½ standard deviation above the mean, except for dichotomous variables (which are set at 0 and 1). All other variables in each equation are held at their mean values. This post-estimation analysis is based on Specification #2. The variables included in "Negative sociotropic evaluations" are: *Macroeconomic situation*, *Macroeconomic future*, and *Income gap*. The variables included in "Pessimism" are *Dissatisfaction with world*, *Immigration*, *Protect Culture*, and *Losing tradition*. All other category names are also variable names, with country-level variables appearing below the line.

Discussion

Summary

This study has examined mass perceptions of corruption at the individual level in a way that has engaged with the major themes in the corruption literature – causes and consequences, definition and measurement, and implications for anticorruption programs. Evaluations of political corruption as a "problem" involve assessments of both the prevalence of corruption and the extent to which political corruption threatens something of value to an individual, though the latter is especially important. Understanding the sources of such evaluations is essential to governance efforts aimed at reducing the negative and pervasive consequences of corruption.

I have used a theoretical approach focused on the microfoundations of security, though I have also considered alternative hypotheses and causal mechanisms. The results of multilevel mixed-effects logistic regression analyses and post-estimation analyses provide support for the security approach but leave the door open in some circumstances for the consideration of other causal mechanisms. Vulnerability only appears to affect corruption perceptions via subjective, sociotropic assessments – a finding that fits with other literatures like the economic voting literature. Uncertainty about sociotropic conditions also contribute to feelings of vulnerability. Standard findings concerning sex and income as measures of vulnerability are contradicted by the findings here. Additional analysis provides some support for the view that a sub-population of women is less likely to see corruption as a problem or threat because they leave it to the men to take care of such things. The finding for income may be indicative of either loss aversion or exposure to corruption information. It seems unlikely that these findings are a result of men and

higher-income individuals suffering the negative consequences of political corruption in a disproportionate way, however.

Approaches and orientations toward insecurity are especially important in evaluations of corruption as a threat. Negative feelings directed toward politics and toward the government and its agents influence corruption. Pessimism, particularly directed at other people, also increases perceptions of threat from corruption. Negativity and blame form a close relationship in affecting corruption perceptions.

Greater education, which may indicate enhanced information-seeking and access to information, serves to increase threat perceptions, as well. Individuals with more education may receive more messages about the negative consequences of corruption and may be better able to understand those messages. They may also be more attentive to particular instances of corruption in the news. Direct exposure to bribery, too, serves as a source of information. Greater experience with bribery increases perceived threat from corruption, but only in the sample of developing countries. However, this limitation may not matter much given that more developed countries are believed to have lower actual rates of bribery.

As measured here, environmental instability or uncertainty does not affect corruption perceptions, while conflict or social norms of mistrust only matter for developing countries. The findings with regard to the free flow of information in a society favors either the interpretation that transparency reduces (or seems to reduce) corruption in a way that is subsequently reflected in individual evaluations.

A series of variables tested the assertion that the negative aggregate consequences of corruption shift mass perceptions in a negative direction. Since the negative

consequences are based on studies that primarily use elite perceptions as corruption measures, these hypotheses also evaluate to some degree how well mass and elite perceptions of corruption move together (though causality is in opposite directions). Lesser wealth production affects mass perceptions of corruption only if one does not control for elite perceptions (which are highly collinear with GDP per capita), while national debt (a two-pronged consequence of corruption due to spending waste and politician attempts to enhance the flow of rents) only matters among developing countries. A number of other variables failed to produce statistically significant results. Elite assessments of corruption were also included in most of the specifications, though primarily as a control. The positive, statistically significant, and substantively large results demonstrate a decent correspondence between elite and mass perceptions.

A number of questions flow directly out of the analyses performed here. First, do these results hold with other types of dependent variables, and to what degree are they time variant? Second, it is unclear whether the correspondence between elite and mass perceptions of corruption are spurious (i.e., the perceptions of both elites and other individuals are subject to the same outside causal factors) or are indicative that elite messages are reaching the masses. More direct information on elite messages and on mass attentiveness to these messages is necessary to provide more definitive answers to this question. Third, the informational findings at the individual and aggregate levels appear to be contradictory. Individuals with more information are more likely to see corruption as a very big problem, though freer social flows of information decrease perceptions of threat. Why is this? Finally, the finding for experiences with bribery is

rather unimpressive. Is this because everyday bribery and political corruption are evaluated in completely different ways, or is some other explanation more likely?

Implications

The use of perception-based measures of corruption makes the sources of those perceptions important, regardless of what is supposed to generate actual levels of corruption. As Miller (2006) points out, perceptions of corruption may be a function of such things as gossip, scandals or allegations in the media, an individual's own experience of unfair treatment or own corrupt behavior, and the corruptibility of the individual. Based on the present study, if elite perceptions arise similarly to those of other individuals, we know that negative sociotropic evaluations, blame, and other forms of pessimism can all influence elite assessments. Educational patterns, freedom of the press, and other factors could also bias results. Accordingly, aggregate measures based on elite perceptions are biased to the extent that countries vary in the distribution of such attitudes and orientations. Furthermore, elite samples are biased toward being male and relatively wealthy, as mentioned earlier. Again, if the results produced here are also applicable to elites, the greater proportion of both males and relatively wealthy individuals in the sample will tend to inflate the perceived threat from political corruption. The greater education among elites further reinforces this inflation.

Do these results offer any clues or prescriptions for governance? The widespread belief that corruption is a "very big" problem certainly indicates that the public will support (or at least acquiesce to) anticorruption programs, perhaps even if they involve some initial sacrifices. Claims of a widely accepted "culture of corruption" are excuses

with little empirical basis. For those cases in which support for tough reforms is not sufficient, the "fixes" suggested by these results are not necessarily palatable from a normative standpoint. Strategically sowing the seeds of pessimism and blame and circumscribing press freedom are tools typically associated with tyrants and demagogues; such strategies will backfire in the long run, as well. Additionally, the results suggest no quick fix for those instances when having public perceptions reflect corruption improvements would be helpful. The attitudes, orientations, and patterns underlying corruption perceptions are not easily adjusted. Getting people to believe in change where negative patterns exist will be especially difficult.

The results ultimately reflect patterns of reinforcing negativity and reinforcing positivity. Whether these reinforcing patterns contribute to actual corruption levels is unknown, but it is certainly a reasonable assertion that pessimism causes individuals to commit corrupt acts. The focus of governors, then, should be on programs that give people hope and optimism and create feelings of security. These programs are likely to have multiplicative effects that influence corruption and much more.

CHAPTER 4

THE THREAT FROM TERRORISM

Introduction

This chapter follows the design of the previous two in examining the perceived threat from terrorism using a security microfoundations perspective. In countries facing threats from terrorists, understanding the sources of threat perceptions among the populace is essential information for getting citizens to act in their own best interests. Inappropriately high levels of fear prevent the wheels of commerce from turning and may induce panicked behavior that is harmful both generally and for antiterrorism activities in particular. Inappropriately low levels of concern about terrorist attacks detract from necessary preparation and vigilance and can lead to unnecessary casualties. Information about individual insecurity as it pertains to terrorism may also help governments craft effective threat messages that do not alienate citizens or make them distrustful.

Much of the existing research relevant to individual attitudes and terrorism is psychological in nature and utilizes experiments. Additionally, much of this research has looked at responses to threat rather than sources of threat perceptions. Huddy *et al.* (2002) provide a good overview of the responses to threat found in the literature, including ethnocentrism, xenophobia, intolerance, closed-mindedness, and increased attention to and thought about threats. Additionally, Cohen *et al.* (2005) talk about experimental tests of Terror Management Theory, which proposes that humans use cultural worldviews as a source of comfort in a world that is ultimately going to kill them. The only studies that directly address sources of threat perceptions with regard to terrorism are Huddy *et al.* (2002) and Huddy *et al.* (2005), but this question is only a preliminary sidelight for the main analysis in each study and is analyzed only for the U.S. case. The main question for the former study concerns the differential consequences of

perceived *personal* threat and perceived *national* threat, while the primary question for the latter concerns the differential consequences of anxiety and perceived threat. Huddy *et al.* (2002) utilize a survey conducted only in the New York City area, while Huddy *et al.* (2005) utilize a nationwide survey.

Hypotheses

Individual-level Hypotheses

Though the findings across the Huddy *et al.* (2002) and Huddy *et al.* (2005) studies differ slightly, in general the authors find greater perceived threat among: women, ethnic minorities, those in trade or labor occupations, the less educated, the less wealthy, those living nearer to the 9/11 attacks (though these results vary) or who knew somebody missing after the attacks, and those with more authoritarian personalities. These findings, of course, align rather well with the vulnerability hypothesis proposed in earlier chapters. I propose that these vulnerability relationships should also apply in a sample with dozens of countries.

The approaches and orientations toward insecurity proposed in earlier chapters should also apply in the case of terrorism – perhaps even more clearly in the case of terrorism. To some extent, these approaches and orientations align with the "cultural worldviews" that Terror Management Theory proposes as sources of terrorism and responses to terrorism. Xenophobic attitudes in particular should play a role, given the clear linkages between terrorist attacks and human perpetrators. The media is fond of talking about the "faces" of terror. Worry also figures to play a prominent role due to the serious consequences and horrific nature of terrorism. Finally, the U.S. is a terrorism focal point and was especially so in 2002 when the data were collected. As the U.S. is

billed as the primary "opponent" of terror, more negative attitudes toward the U.S. should dampen terror concerns while more positive attitudes should accentuate the sense of threat.

In the case of corruption it was proposed that greater individual information would increase the sense of threat because it would also increase individual information about the negative consequences of corruption. The expectation with regard to terrorism is less clear, however. While some of the messages coming from elites stoke fear, a good deal of information about the infrequency of terrorist attacks is also available. Fear-based messages also tend to have short-term impacts. In addition, terrorism is a subject area in which the vulnerability effect tied to education (i.e., greater perceived threat among the less educated) could also be clearer than in previous chapters.

Country-level Hypotheses

At the country level, we should expect people in countries targeted by terrorists to feel a greater sense of threat. Though this study presently does not contain a measure of terrorist incidents (see the discussion at the end of the chapter), it does contain measures of power. Country characteristics like larger populations and higher government expenditures, as indicators of greater power, should also indicate the extent to which a country is a target of disaffected terrorists. Countervailing such an effect, however, would be an environmental feature like system stability. Political stability, for example, would offer hopes both of more effective anti-terror policies and of less terrorism born of political conflict within the country. Equivalently, an unstable environment should

enhance feelings of vulnerability, while discomfort with instability or ambiguity should augment such feelings.

Data and Methods

This chapter utilizes the same data sources and methodologies as the previous chapter. Appendix E provides a description of all new independent variables at the individual and country levels in addition to descriptions for all variables used previously. The dependent variable here is *Terror threat*, which is a subjective individual assessment of the extent to which terrorism is a problem in the respondent's country. The response options are: a very big problem (54.90%), a moderately big problem (21.34%), a small problem (14.61%), or not a problem at all (9.15%). The responses have been recoded to create a dichotomous variable with "very big problem" as the 1 category, with "don't know" responses included in the 0 category. The 1 category of the final version of the variable contains 52.90% of respondents. As with the chapter on corruption, this chapter also uses multilevel mixed-effects logistic regression as its primary method of analysis.

Table 8. Multilevel Mixed-Effects Logistic Regression on Perceived Threat from Terrorism

Individual-level Variables	Specification #1 (Core)		Specification #2 (No Worry Index)	
Children	-0.0059	(0.0344)	-0.0042	(0.0326)
Female	0.0379	(0.0290)	0.1352***	(0.0275)
High income	-0.1097***	(0.0323)	-0.1277***	(0.0307)
Own situation	0.0138	(0.0083)	0.0077	(0.0079)
Own future	0.0255***	(0.0072)	0.0292***	(0.0068)
Macroeconomic situation	0.0021	(0.0130)	0.0245*	(0.0123)
Worry index	1.1410***	(0.0242)		
Dissatisfaction w/world	0.0432*	(0.0194)	0.0905***	(0.0183)
Restrict entry	0.0849***	(0.0117)	0.1410***	(0.0111)
Chauvinism	0.1194***	(0.0116)	0.1617***	(0.0110)
U.S. ideas and customs				
U.S. fight against terror				
No computer	0.1177***	(0.0216)	0.1248***	(0.0205)
Education level	-0.0258*	(0.0118)	-0.0276*	(0.0112)
Constant	-7.8559***	(0.5775)	-3.8711***	(0.5521)
Country-level Variables				
Population (in millions)	0.0034***	(0.0007)	0.0031***	(0.0007)
Government expenditures per capita	0.0001*	(0.0001)	0.0001	(0.0001)
Political stability	-0.4962**	(0.1801)	-0.5461**	(0.1746)
Uncertainty avoidance	0.0195**	(0.0070)	0.0210**	(0.0067)
Random Effects				
Constant S.D.	0.7101	(0.0819)	0.6886	(0.0791)

NOTES: Standard errors appear in parentheses. All tests are two tailed. See Table 9 for details. The random effects estimate is a standard deviation for the constant. This estimate is several times larger than its standard error, suggesting that permitting the country intercepts to vary is prudent.

***$p \leq 0.001$ **$p \leq 0.01$ *$p \leq 0.05$

Table 8. Multilevel Mixed-Effects Logistic Regression on Perceived Threat from Terrorism (Continued)

Individual-level Variables	Specification #3 (Views of U.S.)		Specification #4 (Alternative DV)	
Children	-0.0020	(0.0361)	0.0523	(0.0386)
Female	0.0194	(0.0302)	0.1354***	(0.0323)
High income	-0.1068***	(0.0336)	-0.0721*	(0.0361)
Own situation	0.0161	(0.0086)	0.0241*	(0.0095)
Own future	0.0230**	(0.0074)	0.0168*	(0.0082)
Macroeconomic situation	-0.0004	(0.0135)	-0.0473***	(0.0146)
Worry index	1.1604***	(0.0253)	1.1047***	(0.0253)
Dissatisfaction w/world	0.0507*	(0.0201)	0.0512*	(0.0211)
Restrict entry	0.0756***	(0.0121)	0.0703***	(0.0127)
Chauvinism	0.1179***	(0.0121)	0.0954***	(0.0128)
U.S. ideas and customs	-0.0593***	(0.0173)		
U.S. fight against terror	-0.1077***	(0.0183)		
No computer	0.1208***	(0.0228)	0.0978***	(0.0243)
Education level	-0.0218	(0.0121)	-0.0078	(0.0132)
Constant	-7.6071***	(0.5981)	-6.8283***	(0.6370)
Country-level Variables				
Population (in millions)	0.0035***	(0.0007)	0.0034***	(0.0008)
Government expenditures per capita	0.0001*	(0.0001)	0.0002***	(0.0001)
Political stability	-0.5111**	(0.1862)	-0.5442**	(0.1991)
Uncertainty avoidance	0.0195**	(0.0072)	0.0248***	(0.0077)
Random Effects				
Constant S.D.	0.7327	(0.0857)	0.7855	(0.0916)

NOTES: Standard errors appear in parentheses. All tests are two tailed. See Table 9 for details. The random effects estimate is a standard deviation for the constant. This estimate is several times larger than its standard error, suggesting that permitting the country intercepts to vary is prudent.

***$p \leq 0.001$ **$p \leq 0.01$ *$p \leq 0.05$

Results

Table 8 presents the results of the main analyses, with four different specifications for the multilevel mixed-effects logistic regression model. The first specification is the core specification. The second specification removes worry from the equation due to its overwhelming influence. The third equation adds affect toward the U.S. to the core specification (thereby eliminating U.S. respondents from the sample), and the final specification utilizes a different form of the dependent variable. Table 9 presents model characteristics for each specification.

The need for Specification #2 is worth mentioning at this juncture. The *Worry Index* variable is relatively highly correlated with the dependent variable ($r = 0.358$). Though this correlation makes sense from a theoretical perspective, the structure of the survey also likely contributes. The questions for the worry index and the question about terrorism are part of the same series of questions about problems in the respondent's country. Therefore, one would expect a certain degree of correlation due to the similar question wording, structure, and placement within the survey. However, it seems rather unlikely that the survey structure is the primary reason for this set of correlations. In any case, Specification #2 removes the worry variable to examine what happens to the remaining independent variables in the equation, and the substantive effects are minimal.

The vulnerability hypothesis fares relatively well, though not all the variables produce statistically significant results. Having children (*Children*) does not increase one's sense of vulnerability in a way that influences perceived threat from terrorism, nor does the conventional wisdom about "terror moms" appear in the data (via an interaction between having children and being female that is not shown in Table 8). Being female

increases perceived threat in a statistically significant way in some of the equations but not in others. Removing the worry variable reveals this relationship (Specification #2), as women are bigger worriers in the data overall. Using the version of the dependent variable that places both "very big problem" and "moderately big problem" in the 1 category reveals the relationship, as well. The income variable (*High income*) also performs in accordance with the vulnerability hypothesis, with lower level individuals perceiving a greater threat. Different from the result obtained in the previous chapter, the subjective assessment most important here is the egocentric future one (*Own future*). Predictions of one's own future vulnerability are most closely tied to perceptions of threat from terrorism.

In terms of approaches and orientations toward insecurity, worry (*Worry Index*) has a tremendous effect on threat perception, as already indicated. Table 10 provides estimates of effect sizes, using the same methodology as in the previous chapter. A centered standard deviation change in the worry variable generates an increase in the likelihood of falling into the "very big problem" category equivalent to about 21 percentage points (for Specification #3). Generalized pessimism (*Dissatisfaction with the world*) increases perceived threat as one would anticipate. Xenophobic attitudes (*Restrict entry, Chauvinism*) are relatively important causal factors as predicted, with a centered standard deviation change producing a change of about 6 percentage points in the dependent variable. These two variables in particular demonstrate increased predictive power when worry is removed from the equation, which is reflective of the correlation between anxiety and xenophobia. Also supporting this finding (but not shown due to a decreased sample size), is that individuals who dislike the impact that ethnic minorities

are having in their countries perceive a greater threat from terrorism. Finally, dislike for the U.S. and its policies (*U.S. ideas and customs*, *U.S. fights against terror*) does indeed decrease concerns about terrorism.

The results favor the interpretation that having information decreases the perception of threat from terrorism. Individuals without computers (*No computer*) and individuals with less education (*Education level*) tend to see a greater threat from terrorism. Though not shown here due to a reduced sample size for the question, not having traveled to other countries in the last five years also contributes to increased threat perception. This particular finding suggests that having information about the outside world tends to decrease apprehension about the threats emanating from it, supporting both the informational account and the xenophobic account. Replacing the country-level population measure with a measure of economic openness (due to high collinearity) provides similar evidence in that greater openness tends to decrease concerns about terror.

The country-level variables included in the equations perform as expected. More powerful target countries, as indicated by *Population (in millions)* and *Government expenditures per capita*, do exhibit higher levels of apprehension about terrorism. Furthermore, *Political stability* does have a calming influence, while discomfort with ambiguity (*Uncertainty avoidance*) tends to increase threat perceptions.

Table 9. Estimation Information

	Specification #1 (Core)	Specification #2 (No Worry Index)	Specification #3 (Views of U.S.)	Specification #4 (Alternative DV)
Sample Sizes (Countries)	27,637 (40)	27,735 (40)	26,015 (39)	27,637 (40)
Log Likelihood	-14,688.507	-16,031.566	-13,655.877	-12,301.265
Wald χ^2	2,718.24 ($p \leq 0.0001$)	684.57 ($p \leq 0.0001$)	2,567.29 ($p \leq 0.0001$)	2,295.99 ($p \leq 0.0001$)
AIC	29,413.01	32,097.13	27,351.75	24,638.53
LR Test vs. Logistic Regression	1,834.25 ($p \leq 0.0001$)	2,076.15 ($p \leq 0.0001$)	1,824.19 ($p \leq 0.0001$)	1,625.03 ($p \leq 0.0001$)

Some minor changes in effects are observed across specifications, especially for the alternate dependent variable used in Specification #4, but overall the results in Table 8 are rather robust to specification differences. Variables that lose statistical significance often are still significant with a one-tailed test, as well. A logistic regression for the U.S. only (eliminating the country-level variables) demonstrates that the U.S. was not an unusual case vis-à-vis the overall findings, even in 2002. Particularly strong predictors for the U.S. case are *Female*, *Worry index*, *Restrict entry*, *Chauvinism*, and *Education level*. Furthermore, Specification #3, which eliminates U.S. respondents, provides evidence that the U.S. sub-sample is not driving the overall results. These analyses have not yet fully considered the random effects of individual-level variables across countries. Preliminary analysis suggests that the impact of socioeconomic assessments does not differ in an appreciable way across countries, contrary to a "roots of terror" hypothesis. Sex may have a variable effect as in the previous chapter, however. I have already

mentioned the substantively large influences of worry and xenophobia. Though one cannot compare across levels, the impact of the country-level variables is also rather large. This is particularly true of a country's population, which in Table 10 increases threat perception by about 23 percentage points for a centered standard-deviation change.

Table 10. Changes in Predicted Probabilities by Profile

Profile	Low	High	Absolute Difference
Income	0.5663	0.5399	0.0264
Own future	0.5478	0.5621	0.0143
Worry	0.4497	0.6555	0.2058
Dissatisfaction w/world	0.5501	0.5598	0.0097
Xenophobia	0.5230	0.5864	0.0634
Views toward U.S.	0.5739	0.5358	0.0381
No computer	0.5428	0.5669	0.0241
Population	0.4372	0.6671	0.2299
Government expenditures	0.5114	0.5977	0.0863
Political stability	0.6063	0.5022	0.1041
Uncertainty avoidance	0.5120	0.5971	0.0851

NOTES: Predicted probabilities are for the dependent variable taking the value of 1 (as opposed to 0). "Low" values are ½ standard deviation below the mean, while "high" values are ½ standard deviation above the mean. The exception is that dichotomous variables are changed from 0 to 1. All other variables in each equation are held at their mean values. This post-estimation analysis is based on Specification #3. The variables included in "Xenophobia" are: *Restrict entry* and *Chauvinism*. The variables included in "Views toward U.S." are *U.S. ideas and customs* and *U.S. fight against terror*. All other category names are also variable names, with country-level variables appearing below the line. The mean value for the dependent variable for the respondents included in the analysis is 0.5348.

Discussion

As in previous chapters, again we see reinforcing patterns of negativity, xenophobia, threat, and limited information. Authors elsewhere have established the consequences of greater perceived threat from terrorism, including supportiveness for anti-terrorism policies that incorporate negative stereotypes (Huddy *et al.* 2005), behaviors designed to decrease exposure to risk (Huddy *et al.* 2002), decreased political tolerance (Skitka, Bauman, and Mullen 2004), and greater willingness to trade off civil liberties for anti-terrorism protections, in particular among individuals who are more trusting of government (Davis and Silver 2004). Terrorist events have also been linked to behaviors like seeking out unnecessary drug treatment (Belongia *et al.* 2005) and averting normal purchases (Schulden *et al.* 2006). In sum, perceived threat from terrorism has important consequences for political and social behaviors, thereby adding significance to understanding the sources of these perceptions.

Though others have conducted a limited analysis of perceived threat from terrorism in the U.S., this study provides a theoretical framework for the analysis and conducts empirical tests with a multiple-country sample. The present study reaffirms previous findings about vulnerable populations and increased threat perception in some ways. Sex and education do not produce consistent results, but lower-income individuals and those who feel more concerned about their own personal future welfare exhibit higher perceived threat from terrorism.

I also find that increased perceived threat is associated with worry, generalized pessimism, xenophobic attitudes, and positive views of the U.S. As was the case with corruption, negativity, blame, and affect are key predictors of terror threat perceptions.

These attitudes reaffirm and go beyond previous findings concerning authoritarianism and threat perception, as well as the assertions about cultural worldviews contained in Terror Management Theory. Informational effects also appear in these results. Lesser access to information and lesser accessibility of information both contribute to higher perceived threat, as does a lack of contact with the world beyond one's own country. Finally, living in a powerful country increases perceived threat, though stability and greater comfort with ambiguity tend to counter such apprehension. The result based on country population is perhaps open to dispute. Certainly, some of the effect for larger countries is due to the fact that some very populous countries are frequently embroiled in conflict and/or are subject to "internal" terrorism from separatist movements (e.g., India, Pakistan, Nigeria, Russia). The more correct assertion may be that less populous countries typically have less reason to worry about terror attacks.

This study has used the approach of incorporating the "objective" risk from terrorism via the power of a respondent's country. However, controlling for actual terrorism events may also be useful. LaFree *et al.* (2006) and Clauset, Young, and Gleditsch (2007) discuss some of the data sources available. The U.S. Department of State's *Country Reports on Terrorism* and *Patterns of Global Terrorism* (http://www.state.gov/s/ct/) constitute one source of information. The ITERATE data set (Mickolus *et al.* 2004) and the RAND-MIPT Terrorism Incident Database Project are two other commonly used sources that catalogue international terrorist events. The latter database, however, is in the process of being fused with the Global Terrorism Database (http://www.start.umd.edu/data/gtd/) run by the National Consortium for the Study of Terrorism and Responses to Terrorism at the University of Maryland. The Global

Terrorism Database, in turn, appears to be built upon the original database assembled by the PGIS Corporation's Global Intelligence Service. Yet another potential source of information is the Political Terror Scale (http://www.politicalterrorscale.org/about.html), though this resource is focused on terror produced by governments for the people of their own societies.

As with corruption, the policy implications of these findings are in some ways normatively troubling. Governments wishing to craft messages that will increase perceived threat should focus on appealing to worry, pessimism, xenophobia, and on increasing positive affect for the targets of terrorism. Less normatively troubling are the implications for governments wishing to dampen concern about terrorism, in which case appeals should attempt to reduce factors like anxiety, pessimism, and xenophobia.

CHAPTER 5

CONCLUSIONS

The Microfoundations of Security

This project has proposed an examination of the microfoundations of security as a means of better understanding "human security" and its implications for governance. The theoretical framework proposed here proceeds based on three assumptions. First, a non-trivial proportion of important political attitudes and behaviors are predicated on self-interested security considerations, including in some cases what would appear to be other-focused attitudes and behaviors. Second, the domain of security microfoundations is one of bounded rationality, meaning that cognitive and informational limitations have substantive impacts. Third, empirical research can usefully contribute to understanding the microfoundations of security.

Additionally, the framework consists of four categories of factors thought to drive individual security considerations. The first category includes the elements of individual risk assessments. Essentially, an individual assesses threats using her baseline security, which is a function of other perceived threats, capabilities for warding off those threats, and uncertainty. The vulnerability hypothesis proposes that individuals in more vulnerable situations tend to estimate greater threat from a wide range of sources. The second category includes what I have called approaches and orientations toward insecurity. The "worldviews" of the psychological risk perception literature and the "cultural worldviews" of Terror Management Theory overlap to a degree with this second category. The third category includes informational characteristics of an individual, since these characteristics influence the inputs and processing for individual threat assessments. The fourth category includes environmental patterns and processes that may affect individual evaluations of threat.

Though each of the empirical chapters contains a relatively thorough treatment of the success of these categories in explaining threat assessments, a recapitulation here will aid in overall consideration of the framework. The *vulnerability* hypothesis fares relatively well, though it is at times subject to alternative interpretations. With regard to attitudes toward globalization, the effects for ten different variables operationalizing actual or perceived vulnerability all conform to the vulnerability hypothesis. In the case of corruption, findings regarding various forms of sociotropic assessments correspond to the vulnerability hypothesis. For terrorism, the individual's income and assessment of her personal future are meaningful indicators of vulnerability. The results for *approaches and orientations toward security* are perhaps even more impressive, and they work in very similar ways across the three issue areas. In particular, approaches focused on blame, pessimism, solidarity against outgroups, and tradition tend to increase perceived threat. General worry or anxiety is a powerful predictor for corruption and terrorism, as well.

Informational characteristics also perform as expected, but the directionality of effects is not constant due to dependence on the informational environment. While greater information decreases threat assessments for globalization and terrorism, it increases threat assessments in the case of corruption. The *a priori* reasoning for the corruption finding is that people with greater access to information should receive more of the messages about the negative consequences of corruption. On the other hand, the majority of globalization messages have been positive. The relative infrequency of terror attacks is an accessible message for more educated individuals, as well. Worth noting is that the results for globalization and terrorism may also be indicative of the vulnerability

effect at work (i.e., more educated individuals are less vulnerable or perceive themselves to be less vulnerable).

Environmental patterns and processes generally work in ways consistent with a security microfoundations approach, as well. Here the importance of issue context is paramount, however. With globalization, people seem to use sociotropic clues (either directly perceived or obtained via elite messages) as assessment tools. The monetary benefits provided to a society by globalization appear to be particularly important gauge of security. With corruption, informational patterns and transparency drive threat assessments. With terrorism, the status of the individual's environment as a target of terrorists, political stability, and the level of comfort with ambiguity are important factors.

Overall, the security microfoundations framework appears to provide significant theoretical and analytical leverage, though the framework's breadth of relevance is a subject for further work. The framework is relatively comprehensive, but this comprehensiveness does not mean that "anything goes." The system of relationships within the framework must be theoretically consistent and must bear fruit empirically. The boundedly rational approach also seems productive – a feature most clearly on display in comparing the rational choice approach to the boundedly rational approach with regard to attitudes toward globalization. Previously identified cognitive heuristics and biases largely function as expected across issue areas, as well.

The "punch lines" for the three empirical studies are supportive of the security microfoundations framework. The framework provides a more plausible and comprehensive explanation for attitudes toward globalization than the one provided by

the standard rational choice approach (though the framework is not necessarily at odds with very relaxed forms of rational choice theory). Applying the framework in the area of corruption provides leverage over a rather unstudied question. The framework consistently demonstrates that corruption perceptions are the result of much more than mere observation. The framework's explanation of perceived threat from terrorism expands previous U.S.-based research and again shows that "objective" risk is only one of multiple components used in individual evaluations of threat.

While the three studies demonstrate that certain individual-level aspects of security are rather constant, the results also suggest that an individual's political, social, and economic contexts are important. The variance in random country intercepts and variables (where used) is one way in which context manifests its significance. The impact of country-level variables is another manifestation, since these variables typically indicate differences in informational, social, and institutional patterns.

Understanding Risk Perception

Another goal of this research was to expand existing knowledge concerning risk perception. While largely consistent with previous findings in the risk perception literature, the present studies also incorporate new and more complex issues, new sources of vulnerability, and new "worldviews." Perhaps the two largest contributions of the present research are the demonstrations of contextual impacts and the demonstration of the relative importance of approaches and orientations toward insecurity.

Topical context is one consequential contextual differentiator. While certain facets of individual security are relatively universal (e.g., the role of vulnerability), how

the individual assesses these facets changes from one issue area to another. The complexity of the potential threat also plays a key role. As opposed to health or environmental threats, which in general have clear downsides, a phenomenon like globalization also may enhance security. The studies have also demonstrated that the geopolitical context matters. Some effects match the risk perception literature on average but differ in their impacts across countries. The significant results for system-level variables further reinforce the importance of an individual's location. Topical and geopolitical context both matter in that they are indicators of different informational environments, as well. The content and volume of messages are not constant across issues, times, and places. Consequently, we should expect threat perceptions to be somewhat variable, as well.

The full list of "worldviews" considered in the present research expands the previous list substantially. Multiple forms of pessimism, xenophobia, blame, and conservatism are relevant. Rough estimates of effect sizes additionally indicate that these approaches and orientations toward insecurity have substantively large impacts – typically even larger than common heuristics and biases.

Governance and Human Security

Each empirical chapter has also briefly considered the implications of the findings for governance, but closer consideration of this issue is an important exercise. The bottom line is that human security, as considered from the bottom up, is based on many factors beyond objectively measured threats. The results of all three chapters reveal reinforcing patterns of negativity and positivity. Feelings of threat and insecurity generate

attitudes and orientations that further inflate the sense of threat from many directions. For example, increased threat can bolster xenophobia and reliance on the ingroup, and these types of approaches to the world will increase future threat assessments. The results also provide evidence for a "security-development nexus" operating at the individual level. Feelings of insecurity, vulnerability, isolation, and pessimism feed off one another. Those individuals who feel more vulnerable due to lesser capacity and power also see greater threats in the world. Such individuals are also less willing to take risks that could help the situation.

This project has made the case that dealing with individual insecurity is an obligation of governance. What, then, are the policy prescriptions for getting perceptions of threat to better align with more objective measures and for making people feel more secure so as to limit the negative ramifications of feeling insecure? While the implications mentioned in each individual chapter have been grim in some ways, stepping back provides a useful perspective.

One conclusion we can draw is that finding ways to instill hope, optimism, and feelings of security can have a multiplier effect across many policy areas. Building trust and confidence in government is one potential avenue for achieving such a result, while programs that provide targeted help for traditionally vulnerable populations may be another. Fostering tolerance of diversity and understanding of the "outside" are other factors that will feed into positive reinforcing loops.

Another conclusion is that creating a more open information environment full of citizens equipped to take in and use that information can help to align mass threat perceptions with more objective standards. Though we cannot be absolutely sure without

data explicitly linking elite messages to individual perceptions, the results obtained here suggest that more educated individuals with access to more outside information suffer from smaller bias in assessing risk. Such individuals are more responsive to elite messages, which can be crafted to emphasize such things as sociotropic successes and the human side of outsiders. Another factor working in favor of governments is that perceptions are often more important than actual conditions. The former can sometimes be easier to change.

The normatively troubling area is the one of generating assessments of greater threat to prevent unnecessary loss. Closing informational flows and engendering negativity and blame are strategies with undesirable secondary and long-term effects. However, the results also imply that solid informational networks and a well-educated citizenry are other methods to bolster threat perceptions when necessary. Additionally, emphasizing negative sociotropic indicators in messages may be another method with more palatable consequences.

Human security is neither an entirely objective phenomenon nor one built within individual minds in such a way that knowing about one person is uninformative with regard to others. Yes, elements of security are subjectively determined, but patterns are evident in how individuals go about assessing their security. Though policymakers must keep context dependence in mind, the broad messages and implications of this research are rather general in their applicability.

APPENDICES

APPENDIX A

SUMMARY OF VARIABLES USED IN MAIN GLOBALIZATION ANALYSIS

Variable	Description	Source	Level
Globalization index	Index of attitudes toward interstate trade and business ties; interstate communication and travel; interstate availability of movies, television, and music; interstate availability of products; and interstate connectedness	Pew GAP 2002 (q24-q28)	Individual
Unemployed status	Self-identification as unemployed	Pew GAP 2002 (q6c)	Individual
Food lacking	Not enough money to buy food for the family at some point during last year	Pew GAP 2002 (q87a)	Individual
High income	Higher income than median observed category for country (i.e., category including median individual)	Pew GAP 2002 (q88 variants)	Individual
Female	Female sex as identified by interviewer	Pew GAP 2002 (q73)	Individual
Dissatisfaction with income	Level of satisfaction/dissatisfaction with household income	Pew GAP 2002 (q6a)	Individual
Job availability worse	Trend in availability of good jobs in country over last five years	Pew GAP 2002 (q31a)	Individual
Macroeconomic situation	Evaluation of aggregate economic conditions in individual's country	Pew GAP 2002 (q12)	Individual
Personal future trend	Future assessment minus present assessment of personal situation	Pew GAP 2002 (q2, 4)	Individual
Macroeconomic future	Evaluation of future economic conditions in individual's country over the next year	Pew GAP 2002 (q13)	Individual
Children's future	Assessment of future conditions for children when grown as compared to present conditions	Pew GAP 2002 (q14)	Individual
Worry index	Assessment of whether the following are problems: crime, poor drinking water, spread of HIV/AIDS, poor quality schools, and people leaving for jobs	Pew GAP 2002 (q15a, 15e, 15g, 15h, 15j)	Individual
International corporations	Influence of foreign corporations on conditions in individual's country	Pew GAP 2002 (q35i)	Individual
International organizations	Influence of international organizations on conditions in individual's country	Pew GAP 2002 (q35l)	Individual

Variable	Description	Source	Level
Immigrants	Influence of immigrants on conditions in individual's country	Pew GAP 2002 (q35g)	Individual
Protect culture	Need to protect our way of life from foreign influence	Pew GAP 2002 (q37g)	Individual
Own country superior	Our culture is superior to others	Pew GAP 2002 (q37f)	Individual
Efficacy	Success not determined by forces outside our control	Pew GAP 2002 (q17b)	Individual
Modern pace	Dislike modern pace of life	Pew GAP 2002 (q19)	Individual
Prefer traditional marriage	Marriage with traditional roles is better	Pew GAP 2002 (q38)	Individual
Age	Self-reported respondent age	Pew GAP 2002 (q74)	Individual
No international news	Do not watch an international news channel	Pew GAP 2002 (q60c)	Individual
No computer	Do not use a computer at least occasionally	Pew GAP 2002 (q58)	Individual
News influence bad	Influence of news media on conditions in individual's country	Pew GAP 2002 (q35d)	Individual
Education level	Highest level of education completed, standardized by categories across countries	Pew GAP 2002 (q84 variants)	Individual
GDP per capita PPP in $US	Gross domestic product per capita adjusted for purchasing power parity in $US for 2002	United Nations Human Development Report	Country
Net trade in $US billions	Total exports minus imports in $US billions for 2002	CIA World Factbook	Country
Net migration rate	Net migration rate (inflow – outflow) per 1,000 people for 2002	CIA World Factbook	Country
Life expectancy index	Life Expectancy Index score for 2002	United Nations Human Development Report	Country
Uncertainty avoidance	Uncertainty Avoidance Index value	Hofstede & Hofstede (2005)	Country

NOTES: Pew GAP 2002 indicates the Pew Global Attitudes Project surveys conducted in 2002. The information in parentheses in the source column indicates the original Pew question number(s) prior to any recoding. In an effort to avoid losing cases, "don't know" responses at the individual level have been included in the analysis either as a middle category for multiple-category variables or in the zero category of dichotomous variables.

APPENDIX B

MULTILATERAL ANTICORRUPTION AGREEMENTS AND STANDARDS

Adoption	Name	Organization(s) or Event
1996 March	Inter-American Convention against Corruption	Organization of American States
1996 December	International Code of Conduct for Public Officials	United Nations
1997 November	Twenty Guiding Principles for the Fight against Corruption	Council of Europe
1997 November	Convention on Combating Bribery of Foreign Public Officials in International Business Transactions	Organization for Economic Cooperation and Development
1999 January	Criminal Law Convention on Corruption	Council of Europe
1999 February	Guiding Principles for Fighting Corruption and Safeguarding Integrity among Justice and Security Officials	Global Forum on Fighting Corruption I
1999 June	SCSP Constituent Document	Stability Pact for South Eastern Europe
1999 November	Civil Law Convention on Corruption	Council of Europe
2000 May	Model Code of Conduct for Public Officials	Council of Europe
2000 November	Convention against Transnational Organized Crime	United Nations
2000 December	Anti-Corruption Initiative for Asia-Pacific	Asian Development Bank & OECD
2003 June	The Forty Recommendations	Financial Action Task Force on Money Laundering
2003 July	Convention on Preventing and Combating Corruption	African Union
2003 October	Convention against Corruption	United Nations
2004 November	Course of Action on Fighting Corruption and Ensuring Transparency	Asia-Pacific Economic Cooperation

APPENDIX C

SUMMARY OF VARIABLES USED IN MAIN CORRUPTION ANALYSIS

Variable	Description	Source	Level
Female	Female sex as identified by interviewer	Pew GAP 2002 (q73)	Individual
High income	Higher income than median observed category for country (i.e., category including median individual)	Pew GAP 2002 (q88 variants)	Individual
Unemployed status	Self-identification as unemployed	Pew GAP 2002 (q6c)	Individual
Own situation	Evaluation of present personal status	Pew GAP 2002 (q2)	Individual
Macroeconomic situation	Evaluation of aggregate economic conditions in individual's country	Pew GAP 2002 (q12)	Individual
Own future situation	Evaluation of future personal status	Pew GAP 2002 (q4)	Individual
Macroeconomic future	Evaluation of future economic conditions in individual's country over the next year	Pew GAP 2002 (q13)	Individual
Income gap	Income inequality worse than five years ago	Pew GAP 2002 (q31f)	Individual
Worry index	Assessment of whether the following are problems: crime, moral decline, poor drinking water, terrorism, spread of HIV/AIDS, and poor quality schools	Pew GAP 2002 (q15a, 15d, 15e, 15f, 15g, 15h)	Individual
Politics a major problem	Politics among the top three problems facing the country	Pew GAP 2002 (q8.1, q8.2, q8.3)	Individual
National government	Evaluation of national government's influence on conditions in individual's country	Pew GAP 2002 (q35a)	Individual
National executive	Evaluation of national executive's influence on conditions in individual's country	Pew GAP 2002 (q35b)	Individual
Dissatisfaction with world	Level of satisfaction with the way things are going in the world	Pew GAP 2002 (q9)	Individual
Immigration	Assessment of extent to which immigration is a problem in the individual's country	Pew GAP 2002 (q15i)	Individual

Variable	Description	Source	Level
Protect culture	Need to protect our way of life from foreign influence	Pew GAP 2002 (q37g)	Individual
Efficacy	Success not determined by forces outside our control	Pew GAP 2002 (q17b)	Individual
Losing tradition	Traditional ways being lost	Pew GAP 2002 (q20)	Individual
Education	Age of full education, truncated at 22	Pew GAP 2002 (q85)	Individual
Bribery experience	Frequency of public bribes required in last year to receive government services (asked in less developed countries only)	Pew GAP 2002 (q48)	Individual
Regime durability	Regime age as of 2002	Polity	Country
Intercommunal conflict	Annual index of intercommunal conflict 1998-2002	Minorities at Risk	Country
Press freedom	Freedom of the press 2002	Freedom House	Country
National debt per capita	External public debt per capita (in billions US$) 2002	CIA World Factbook	Country
Corruption	Control of corruption 2002, rescaled to 0-1 and inverted	World Bank Institute's Governance Indicators	Country
GDP per capita PPP in $US	Gross domestic product per capita adjusted for purchasing power parity in $US for 2002	United Nations Human Development Report	Country
Literacy	Percentage of population literate 2002	CIA World Factbook	Country

NOTES: Pew GAP 2002 indicates the Pew Global Attitudes Project surveys conducted in 2002. The information in parentheses in the source column indicates the original Pew question number(s) prior to any recoding. In an effort to avoid losing cases, "don't know" responses at the individual level have been included in the analysis either as a middle category for multiple-category variables or in the zero category of dichotomous variables.

APPENDIX D

CORRELATIONS AMONG COUNTRY CORRUPTION INDICATORS

	Political Corruption (Pew)	Control of Corruption (WB)	Freedom from Corruption (HF)	BEEPS Additional Payments (WB)	Bribery Experience (Pew)
Political Corruption (Pew)	1.000				
Control of Corruption (WB)	0.557 (n = 41)	1.000			
Freedom from Corruption (HF)	0.598 (n = 40)	0.928 (n = 43)	1.000		
BEEPS Additional Payments (WB)	0.518 (n =35)	0.694 (n = 36)	0.677 (n = 36)	1.000	
Bribery Experience (Pew)	0.209 (n = 34)	0.538 (n = 34)	0.473 (n = 33)	0.639 (n = 29)	1.000

NOTES: These aggregate correlations are for countries within the Pew Global Attitudes Project (GAP) sample of 44 countries. The correlations would differ for the three innermost cells if applied to all common countries for a pair of indicators. *Political Corruption* is the unweighted percentage of respondents saying political corruption is a "very big" problem in the 2002 Pew GAP. *Control of Corruption* is an inverted and rescaled (within the 0-1 interval) version of the 2002 measure from the World Bank's "Governance Indicators." *Freedom from Corruption* is an inverted component of the Heritage Foundation's 2002 "Index of Economic Freedom." *BEEPS Additional Payments* is the country mean from the World Bank's 1999 "Business Environment and Enterprise Performance Survey" for a question asking whether additional payments are necessary to get things done. *Bribery Experience* is the unweighted country mean from the Pew 2002 GAP for a question asking how frequently a respondent had to give bribes to receive government services to which she was otherwise entitled.

APPENDIX E

SUMMARY OF VARIABLES USED IN MAIN TERRORISM ANALYSIS

Variable	Description	Source	Level
Children	Whether respondent has children	Pew GAP 2002 (q92)	Individual
Female	Female sex as identified by interviewer	Pew GAP 2002 (q73)	Individual
High income	Higher income than median observed category for country (i.e., category including median individual)	Pew GAP 2002 (q88 variants)	Individual
Own situation	Evaluation of present personal status	Pew GAP 2002 (q2)	Individual
Own future	Evaluation of future personal status	Pew GAP 2002 (q4)	Individual
Macroeconomic situation	Evaluation of aggregate economic conditions in individual's country	Pew GAP 2002 (q12)	Individual
Worry index	Assessment of whether the following are problems: crime, poor drinking water, spread of HIV/AIDS, poor quality schools, and people leaving for jobs	Pew GAP 2002 (q15a, 15e, 15g, 15h, 15j)	Individual
Dissatisfaction with world	Level of satisfaction with the way things are going in the world	Pew GAP 2002 (q9)	Individual
Restrict entry	Need to better restrict entry into country	Pew GAP 2002 (q37i)	Individual
Chauvinism	Superiority of own country's culture	Pew GAP 2002 (q37f)	Individual
U.S. ideas and customs	Spread of U.S. ideas and customs	Pew GAP 2002 (q67)	Individual
U.S. fight against terror	U.S. fight against terror	Pew GAP 2002 (q72)	Individual
No computer	Does not own a computer	Pew GAP 2002 (q60a)	Individual
Education level	Highest level of education completed, standardized by categories across countries	Pew GAP 2002 (q84 variants)	Individual

Variable	Description	Source	Level
Country population (in millions)	Country population (in millions) 2002	CIA World Factbook	Country
Government expenditures per capita	Total government expenditures per capita 2002	CIA World Factbook	Country
Political stability	Political stability 2002	World Bank Institute Governance Indicators	Country
Uncertainty avoidance	Uncertainty Avoidance Index value, with some imputations based on region	Hofstede & Hofstede (2005)	Country

NOTES: Pew GAP 2002 indicates the Pew Global Attitudes Project surveys conducted in 2002. The information in parentheses in the source column indicates the original Pew question number(s) prior to any recoding. In an effort to avoid losing cases, "don't know" responses at the individual level have been included in the analysis either as a middle category for multiple-category variables or in the zero category of dichotomous variables.

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