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SOMETIMES YOU JUST HAVE TO LEAVE: DOMESTIC THREATS AND FORCED MIGRATION, 1964–1989

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In this study we explore why persons flee their homes to become refugees and internally displaced persons. We contend that individuals will tend to flee when the integrity of their person is threatened. Further, we argue that they will flee toward countries where they expect conditions to be better. We conduct statistical analyses using fixed effects least squares, on a pooled cross-sectional time-series data set, consisting of data from 129 countries for the years 1964–1989. Our findings support the conclusion that threats to personal integrity are of primary importance in leading people to abandon their homes. Measures of state threats to personal integrity, dissident threats to personal integrity, and joint state–dissident threats each have statistically significant and substantively important effects on migrant production. We also find that countries making moves toward democracy tend to have greater number of forced migrants, once other factors are considered. We conclude the analysis by identifying several lucrative areas for further investigation.

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INTRODUCTION

Why would someone choose to abandon her/his home, livelihood, and social ties in favor of an uncertain future elsewhere? Surely this is not a decision people make lightly nor is it one devoid of complexity: refugees and internally displaced persons typically abandon their housing, belongings, members of their family and long-time friends, as well as the lands where they may have lived for generations. Yet, increasing numbers of people make just such a decision: since World War II the number of refugees and internally displaced people (forced migrants)[1] has grown steadily (Jenkins and Schmeidl, 1995, p. 65). Our study is motivated by an interest in understanding why people make this decision. More specifically, we address the question: "What characteristics make a country produce forced migrants?"

Before continuing it will prove useful to briefly define the terms we use. These phrases are seldom explicitly and clearly defined within popular discourse and thus academic literature is forced to compete with many preconceived notions about the subject. For our definition of "refugees" we defer to the United Nations. They classify someone in this category as one who:

> owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it (UNHCR, 1999a).

The United Nations similarly defines internally displaced persons as "people [who] are also forced to flee these [same] dangers, but they either cannot or do not wish to cross an international border" (UNHCR, n.d.).

Our image of these groups (and that of most individuals) is dominated by media footage of the former: people living in camps, being fed by volunteers and aid workers. While this is certainly one common experience, we are generally less aware of the latter: many others flee, yet find no camps or aid workers. For example, most Americans are aware that during the summer of 1999, many Kosovars fled for refugee camps in neighboring countries. Few, however, likely know that while an estimated 857,000 fled Kosovo, another 580,000 abandoned their homes, but remained in the province (http://www.reliefweb.int/mapc/eur_bal/reg/natorefidp.html). Fewer still likely know that in the previous spring and summer (1998) over 40,000 Kosovars abandoned their homes and hid in forests and the mountains, setting up their own makeshift camps, or seeking shelter with relatives, while virtually no Kosovars crossed an international border in search of refuge from the fighting (USCR, 1999, pp. 247–248). As the example above illustrates, the two groups share in common their flight from a fear of persecution, but differ in their choice of relocation. Within this article we are interested in the decision to flee but we are not interested in examining the

distance that individuals travel along this path.[2]

Toward this end, our study proceeds in five parts. In the following section we briefly review the literature and conclude that: (1) most large-n studies of forced migration suffer from sample selection bias and/or an emphasis on "push" factors that compel individuals to flee without much attention to "pull" factors that might induce individuals to enter the country in question; (2) most theory prefers to highlight structural characteristics to account for the decisions that drive migration over those that emphasize more micro-level foundations; and (3) most operationalizations of political violence used to examine why individuals flee have been somewhat coarse in nature, ignoring more nuanced and valid indicators. To address the first shortcoming we include in our sample all countries for which we could obtain data and draw upon, as well as extend the research of several scholars that highlight "pull" factors (e.g., Schmeidl, 1995, 1997; Gibney, et al. 1996). To address the second shortcoming we posit a set of assumptions that serve to provide the micro-foundations of forced migration—a major one of which is that people form beliefs about the extent to which they are safe to carry out their lives. To address the third, we answer Schmeidl's (1995, p. 267) call for better measurement of political violence and provide three distinct indicators of the concept. Additionally, we introduce another factor that likely influences forced migration—regime change.

Following this discussion, we propose several hypotheses about the events and circumstances that are likely to lead people to revise their beliefs about their safety, such that they decide to flee rather than stay. Section three describes our research design for testing the hypotheses, our operational indicators, and the estimation technique we use. In the fourth section we present the results, and in the conclusion we explore the implications for future research.

THE LITERATURE AND OUR ARGUMENT

The Literature

There are a number of articles, monographs, and edited volumes that explore the subject of mass exodus in response to violence, but most studies of forced migrants focus on the experiences of the people as they seek new living arrangements and the challenges associated with aiding such populations. The literature on the etiology of forced migrant flows is relatively small and largely idiographic, with few comparative case studies[3] and only a handful of studies that leverage the power of statistical inference. One of the explanations for the paucity of analysis is the belief that the relationship between violation and migration is simplistic and much less complex than that between economic conditions and voluntary migration (e.g., Massey et al., 1993). We disagree with this position.

It will not surprise many observers that the major finding in the etiology literature is that violent political conflicts are the primary determinant of forced migration. What may surprise social scientists is that there are only four published studies that examine this relationship using a global database (Hakovirta, 1986; Schmeidl, 1995, 1997; Gibney, et al. 1996; and Apodaca, 1998). Unfortunately, these studies suffer from various weaknesses and thus the subject is worthy of additional examination.

Schmeidl's (1995, 1997) studies set the standard in the field, and we first discuss the weaknesses in the other studies before discussing her contributions.

The Hakovirta (1986) and Apodaca (1998) analyses suffer from selection bias as they only study countries that produced refugees. Gibney et al. (1996) study global-level, rather than national-level, trends, and thus have little to say about what distinguishes countries that produce migration from those that do not. All three studies ignore internally displaced people and within their analyses they only address bivariate relationships. Finally, these three large-n studies are imbalanced in their consideration of "push" and "pull" factors; the fact that the movement of people might be influenced not only by conditions in their own country but also by conditions in other countries.[4] The voluntary migration literature (e.g., the classic Todaro [1969] model) explicitly recognizes that both push and pull factors influence migration decisions, as do the best comparative analyses of refugee flows (i.e., Clark, 1989; Zolberg et al., 1989; and Weiner, 1996). Despite this work, two of the large-n studies only evaluate circumstances in the sending country (Hakovirta, 1986 and Apodaca, 1998), while one considers circumstances within receiving countries (Gibney et al., 1996).

Schmeidl's (1995, 1997) work stands apart from these other studies as it does not suffer from such fundamental weaknesses with respect to the etiology of forced migration. In fact, we consider the 1997 article the seminal work in the field and began our analysis using her study as a benchmark and consciously built our analyses upon hers. To briefly describe the study, Schmeidl focuses on 109 countries from 1971 to 1990 that produced migration flows as well as those that did not, and she conducts a multivariate analysis that considers both pull and push factors.[5] She finds that:

> measures of institutional human rights violations have weaker predictive power than do measures of generalized violence. Second, civil wars with foreign military interventions are more important in producing large refugee populations and prolonged migrations than are civil wars without outside influence. Third, ethnic rebellion is important as a cause of small refugee migrations, but cannot significantly predict mass exodus. Finally, economic and intervening variables have little impact on predicting refugee migration (1997, p. 284).

Despite the strengths of this work, we contend that Schmeidl's operational measures of violence in society were less than optimal. Our study grounds the measurement of violence in society in the literature on human rights violations, state repression, and political violence.

Further, Schmeidl (and the other studies mentioned above) conceptualizes the problem of refugee flows as a macro-structural issue as opposed to one highlighting the micro-foundations of the individual decisions that produce refugees. At some level this is simply an issue of how best one can frame arguments and utilize available data, and we are not contending that all scholarship need embrace methodological individualism. However, we do argue that developing a theory with micro-foundations is important in this area of inquiry. At the heart of the issue is whether we conceive of abandoning one's home as a choice. If people have no choice but to leave (as the term 'forced migration' implies), then there is no need for micro-foundations: one can work, as the four studies do, at the macro-level, treating individual human beings as stimulus-response mechanisms. However, if one views people as

having a choice to either stay (and fight or, perhaps, become a martyr), then it is important to provide micro-foundations and explain what impacts the decision.

Consider that the popular press often depicts refugees as victims—photos and video footage of streams of people in shock, shuffling along dirt paths, carrying a few precious possessions evoke this image. The accompanying stories recount the extent to which these people have been victimized. While we certainly do not want to dispute that forced migrants have experienced trauma, we think it is a mistake to allow the image of victimization to color our theories in such a way that people would be viewed as having 'no choice but to leave.' Yet a theory that removes choice from human decisions cannot account for the behavior of those who choose not to flee in the face of the same persecution or who choose to enter into a situation that while conflictual is still an improvement over their home location.

Some Micro-foundations and Hypotheses

We begin with the assumption that people make a choice about whether to remain in their homes, in (varying degrees of) possession of their land and material wealth, or to abandon these in favor of an uncertain life elsewhere. To organize the inquiry we submit that it is useful to conceive of the choice individuals face in the following stylized fashion.[6] Let us begin with the assumption that people are intentional, that they take action with some purpose in mind. Assume further that at any given moment in time an individual can (1) choose to abandon her/his property and migrate elsewhere or (2) choose not to do so.[7] Assume also that people value their physical security (i.e., their lives, health, and physical safety), and will relocate if they feel their security is substantially threatened. Finally, assume that people maintain beliefs about the future course of events and, for the purpose of our study, maintain specific beliefs about their personal safety. Given these assumptions, our task is to specify the information that people will monitor in order to sustain or revise their beliefs. We turn to that task below, but first consider two other issues.

First, if we move to the aggregate level of a country of people (rather than an individual person), then these assumptions suggest that as events in the country lead the people of the country to develop poor expectations about their physical security, we should find greater numbers of forced migrants. This is our basic argument: all other things constant, people leave their homes when they feel that their physical security is threatened.

Second, that we are interested in holding other things constant implies that other factors might influence the decision to abandon one's home. The literature suggests that this is likely the case. We discuss the other factors below, but begin with identifying specific factors that provide people with the information they can use to sustain or revise their beliefs about their physical security.

Because emigration and migration are costly, we expect people to generally stay put—large-scale emigration and migration will be unusual, occurring only when some combination of factors leads people to compare their own status quo to conditions in places to which they would flee. The argument sketched above suggests that a high level of "threat" in the domestic political environment will make it more likely that people will flee. As we attempt to address this issue, we argue that it is useful to

distinguish among three sources of threat: 1) state violence, 2) dissident violence, and 3) state–dissident violence.[8] The idea is that these distinctions create a useful typology for distinguishing different sources of threat.

For example, consider the violent conflict in Argentina during the Dirty War, when the state repressed union leaders and leftists, in comparison to the violence in Sierra Leone in the 1990s when rebels were responsible for massive human rights violations and the state was largely uninvolved in such activity. There are also cases, such as South Africa during the 1980s, where both the state and dissidents were engaged in human rights violations, or El Salvador during the 1980s where civil war between the state and dissidents left the general population trapped between the combatants. Our typology recognizes these differences among the sources of violence, and analyses that included only one or two of these categories would be underspecified.

The difference between our threat argument and those of other scholars regarding violence within domestic political environments is twofold. First, it is likely the case that a diversity of threats exist which are somewhat more nuanced than what has previously been considered (e.g., genocide–no genocide, civil war–no civil war). Taking a cue from Schmeidl (1995, 1997), who discussed human rights and ethnic dissent as possible determinants of forced migration, we wish to be as sophisticated as possible in both our conceptualization and measurement of relevant factors. Second, when one thinks about what is "threatening" to a citizen it is clear that not only violence is important but also other factors as well, e.g., alterations in the configuration of authority such as democratization. We thus seek to both refine as well as expand the concept.

The State and Threat. The state can create a threatening environment in both "active" and "passive" ways. We discuss active mechanisms first. Many people choose to flee because they are identified with groups that have become targets of human rights abuses, and as Wood (1994) points out, in an increasing number of cases the very purpose of states' repressive acts is to push out unwanted peoples (also see Van den Berghe, 1990). In other situations the flight of refugees is anticipatory (Kunz, 1981). In these cases individuals might choose to flee from government persecution after having voiced their opposition to a government, in expectation that retribution by the regime is forthcoming. Others choose to flee when they perceive themselves to be in danger because a family member, friend or acquaintance was the recent victim of government violence, anticipating that they would meet the same fate should they stay put.

What the people in each of the above predicaments hold in common is the perception that their security is at risk in their country of origin, and the expectation that their situation would be improved when they reached their destination. People, therefore, will be apt to move away from their homes when they perceive their personal security to be at risk, toward other locales where they are apt to feel more secure.

What forms of active state behavior will lead persons to perceive a threat to their personal security? One is a recent governmental pattern of repressive actions, such as imprisonment, torture, or murder by governments, conducted either arbitrarily or for political purposes (e.g., Stohl and Lopez, 1983; Mason and Krane, 1989). We believe that refugees will tend to move to countries where these basic rights of per-

sonal integrity are less threatened (e.g., Stanley, 1987; Carmack, 1988).

Further, the most serious of all human rights abuses, genocide and politicide, are obvious examples of active state behavior that threatens the personal security of the target population (e.g., Harff and Gurr, 1988; Rummel, 1997; Krain, 1997). In instances of genocide and politicide, governments seek to exterminate an entire people and to force any who remain out of their sovereign territory. Obviously this leads members of that group to quite rightly fear for their security and to flee. Collectively these personal decisions result in acute refugee/displacement situations like that which occurred during the exodus from Rwanda, in 1994, when nearly a third of the country's 7.5 million people abandoned their homes (UNHCR, 1999b).

With respect to passive mechanisms by which the state can influence the threat environment, we contend that the structure of the polity may play a role. That is, on average, autocratic polity structures might be expected to produce a more threatening environment than democratic polity structures which allow people to participate and express their preferences on government policy (e.g., Finer, 1997; Eckstein and Gurr, 1975). Similarly, countries with democratic polity structures may be more likely to attract refugees than those with autocratic polity structures.

One also might expect that the change to democracy from autocracy (i.e., democratization) might usher in a period in which past refugees would return home. By this argument, a trend toward nondemocratic government would be apt to lead persons to feel more threatened, and to leave (e.g., Davenport, 1999).

Alternatively, in the short run some might expect the opposite pattern to occur due to a fear of increased instability under democracy (Newland, 1993; Zakaria, 1997). Particularly in conditions where the regime is changing as a result of popular unrest, democracy brings increased levels of individual/group participation, exchanges of all types, and enhanced levels of activism, as different actors jockey for position (Newland, 1993, p. 91). It is plausible that in such circumstances the change toward greater expression and participation serves to scare some elements of society away, particularly those who may be identified with the departing regime.

Another possibility is suggested by the fall of the Berlin Wall in 1989: authoritarian polities (especially communist ones from the Cold War era) often place restrictions on emigration that limit migration (Zolberg et al., 1989, pp. 16–17; Larrabee, 1992). Democratic polities, on the other hand, have been more likely to place limits on entry than exit. Thus, a change toward democracy (from an autocratic polity) might be associated with a short-run increase in forced migration (Newland, 1993, p. 91).[9]

We thus have two competing expectations about the impact of a polity shift toward democracy, the first suggesting that such a shift would decrease forced migration, the second suggesting that such a shift would increase such activity.

The Dissidents and Threat. Having discussed the state's ability to create an environment that is threatening to personal security, we turn our attention to dissidents. Several refugee situations around the world indicate that not all such situations result from people moving due to fear of persecution by government. Violent protest and terror campaigns by dissident groups can lead to reasonable fears for security. Accordingly, we hypothesize that people will tend to leave their own countries when

violent dissident groups are attacking the state and/or population, immigrating to countries where such conflict is at a lower level.

Specific types of dissident movement that generally produce a threatening environment are violent separatist movements or movements attempting to overthrow the regime (e.g., such as occurred in Mali in 1990–1994). Such movements often lead to flight, as more persons perceive their security to be at risk as situations worsen. Yet these events are not considered to constitute civil war, according to the conventional definition applied in this study, which requires reaching the threshold of 1,000 battle deaths, among other criteria (Singer and Small, 1994). Therefore, we pose the hypothesis that organized violent rebellions also lead to refugee flight. We expect that when such violence is serious, refugees will tend to flee their countries in favor of areas where such movements are not present.

State–Dissident Interaction and Threat. The third source of violence is the combination of both the state and dissident groups, as in civil warfare. Were we to limit our measurement to only cases of state violence or dissident violence, we would miss some of the information that we believe people monitor when deciding whether to revise or sustain their beliefs about their physical security. That is, we suspect that while campaigns of state terror will raise many people's perceptions of threat, and that campaigns of dissident terror will also raise many people's perceptions of threat, large-scale violence by both groups will raise the perception of threat among an even larger group of people. For example, if a state engages in a genocidal pogrom, people who are not members of, or associated with, the victimized group are unlikely to revise substantially their perception of threat. In other words, the perception of threat will be limited to those members of the group. Similarly, when a dissident group engages in violent dissent, it is often the case that many people can reasonably expect that their odds of becoming a victim remain limited. However, when both the state and dissidents are engaged in an armed struggle, the threat of violence gets spread more widely, in part because of random chance, and in part because both sides tend to abuse and torture people in the conflict areas in an attempt to gain information about their enemy. As such, we anticipate that civil warfare will lead many people to perceive a threat to their physical integrity, and hypothesize that refugees will tend to move from states participating in such wars to countries that are not.

Other Variables

Our argument suggests that the presence of environmental cues that imply a threat to the integrity of the person raise the probability that individuals will abandon their homes and become forced migrants. Yet, other factors may also influence the decision. We thus reviewed the theoretical and empirical literature on refugee movements and migration to identify other variables that might co-vary with refugee flows. Two groups struck us as important and influenced our specification of a statistical model: economic security and networks.

Economic Security. Many scholars have argued that refugees' decisions to flee are driven, at least partially, by conditions of poverty in their home countries (e.g., Wood, 1994; Zolberg et al., 1989, Schmeidl, 1997, Zottarelli, 1999). Indeed, some scholars take for granted a linkage between poverty and refugee movements, and advocate "sweetening" economic conditions in "sending countries" as a way of dealing with the problem (Weiner and Munz, 1997). This argument is most strongly associated with the "root causes" approach espoused by Aga Khan (1981).

Zolberg et al. (1989), among others, are critical of the root causes approach. Further, Stanley (1987) and Schmeidl (1997) fail to find support for the proposition that economic conditions affect refugee generation. On the other hand, in time series analyses of Guatemala, Morrison (1993; Morrison and May, 1994) reports that economic opportunity was an important determinant of migration patterns. Rather than attempt to settle this debate, we choose to tentatively put forward the hypothesis that refugees will tend to move from conditions of poverty toward countries with more robust economies.

Network Theory. A number of scholars have argued that migrant networks play a key role in lowering the costs and risks associated with relocation (Massey et al., 1993, pp. 448–450). That is, one should anticipate some temporal contagion in refugee movements because it becomes less costly and less risky to leave as one learns that others who have left were able to find shelter, etc. If other members of the community have already made that journey, information about the experience and opportunity will filter back to those who have not left. That information will lower the costs and risks associated with making the decision to leave. Lower costs and risks make it more likely that should the cues in the environment continue to suggest a threat to the integrity of the person, the people left behind will be more likely to decide to abandon their homes. Thus, in any time series of refugees we should anticipate persistence (or autocorrelation) for two reasons: 1) because the events are rare, the modal expectation in a series is a string of zeros, and 2) once a refugee movement begins, the costs associated with making the decision decline as more people leave.

Size of the Country. Finally, it is important to control for the population of a country simply because the larger the population, the greater number of potential refugees that country could produce. This is less a theoretical than a methodological point. That is, we have no specific reason to believe that, ceteris paribus, countries with larger populations are any more or less likely to produce refugees than countries with smaller populations. Rather, we include population as a control variable because we are interested in determining how many refugees a country produces, and the number of people in the country might well be associated with the number of refugees it produces.

THE EMPIRICAL STUDY

Having laid out the hypotheses, our next task is to describe the empirical analyses we conducted to test them. We begin with a brief description of our research design and sample. This is followed by a discussion of the operationalization of each of the

variables used in the study. We then discuss our selection of a statistical model.

Research Design

Because our argument is bounded by neither time nor space, it seems most reasonable for us to test our hypotheses on a large global sample, covering as many years and countries as possible. Adopting this strategy allows us to minimize the effects of selection bias that often occur when one focuses on only a small subset of countries or cases taken from a single year. The result of our efforts is a pooled cross-sectional time-series (PCTS) data set, where the unit of observation is the country-year. The great advantage of the PCTS design is that it gives us the ability to test our hypotheses over time and space simultaneously. Thus we have a strong data foundation from which to draw our inferences, one that is superior to studies conducting either exclusively cross-sectional or time-series analyses.[10]

Understanding this, obtaining data on such a wide variety of variables for all of the world's countries for many years would be an extraordinarily difficult, if not impossible, task. We therefore employ a sample that is drawn with an eye toward maximizing the number of cases under study, both temporally and spatially, defined only by limits on the availability of data. The resulting data set includes complete data for 129 countries from around the world from 1964 to 1989. They are listed in Appendix 1 to this paper.

Operationalization

In this subsection we describe the measurement of our concepts. The data utilized in this study come from five sources. The dependent variable was constructed using data reported by the United States Committee on Refugees.[11] The genocide/politicide data come from Harff and Gurr (1988) and Fein (1993). The Correlates of War project provided the data for civil wars. Finally, Banks's (1998) Cross-Polity Time Series data was the source for the remaining variables. All cover the period 1964–1989.

The Dependent Variable: Net Migration. Previous statistical analyses of refugee movements have focused on the number, or stock, of displaced refugees originating from a particular host country (e.g., Schmeidl, 1997), or alternatively, the number of refugees in the international system (e.g., Gibney et al., 1996). We include both refugees and internally displaced people because our question—why would people abandon their homes—does not imply an important distinction between the two, and leaving out internally displaced persons would introduce a form of selection bias in our dependent variable.[12] In addition, as we argue above, migrants make the choice to flee from a set of circumstances where they perceive their security to be in danger, toward a situation they expect to be safer (e.g., Gibney et al., 1996).[13] Thus, they not only consider circumstances in the nation from which they originate, but also the one to which they might travel. A better measure of forced migration, then, would consider not only conditions in the source country, i.e., the one provoking refugees and the internally displaced), but would include conditions in both the source country and the destination (i.e., the one hosting refugees).

To get at this question most effectively, one would need to create a dyadic data set

where the movement of refugees and internally displaced persons from one locale to another is recorded. At present, our data are limited to the country where refugees are located: we do not have information on the country of origin for international refugees or within-country variation on internally displaced (where they started and where they end up).[14] Thus, a design that enables us to get a direct look at these questions is beyond the scope of the analysis. Although we do not use a directed-dyadic design here, we are able to gain some leverage on both the push and pull factors by using a dependent variable that is used widely in demographic and migration studies, though not by the other scholars working in this area. Specifically we use the net migration measure developed by Tolnay and Beck (1992).

Tolnay and Beck (1992) were interested in modeling the African-Americans' decisions to migrate from the South, in response especially to violence, during the lynch mob decades of 1910–1930. As such, their question shares similarities with ours. The authors use net migration figures rather than migration figures to study the decisions of African Americans. Net migration is a standard figure calculated by the US Bureau of the Census that is simply the difference of emigration and immigration. Using this measure requires that one include in one's model not only the factors that push people away, but also those that draw people in. While we do not claim that we have a fully specified model (e.g., geographic factors almost certainly play a role in these decisions), we do feel that the factors we have been able to specify do affect both the decision to leave (i.e., to become refugees or internally displaced) and the decision to arrive (i.e., to become hosted as refugee).[15]

Such a distinction is important because it allows us to differentiate between extremely diverse situations. Consider the following example. During the 1964–1989 period Haiti produced many refugees, the United States hosted (and spurned) many seeking asylum, and Guatemala was both a source of refugees as well as a host for them. If we were to assess only the production of refugees, then we would ignore the importance of the U.S. and Guatemala as recipients, as safe havens within the Americas—important information as we are trying to understand how many migrants will be on one country's soil at any given time. If we were to assess only the reception of refugees, however, then we would ignore the importance of Haiti and Guatemala as producers, as relatively unsafe places. This information is crucial because at any point in time some individuals might decide to leave a particular country while others might decide to enter the same locale. To properly evaluate the factors that promote movement, therefore, we must simultaneously consider those that promote invitation as well as hosting. Indeed, if 50,000 individuals vacate a country but 100,000 move into the same country over the same time period, then this should lead us to a different assessment of the situation as opposed to a case where, given the same outflow, immigration did not take place. Net migration is thus superior to using emigration alone because it enables us to draw an inference not only about why people leave their homes, but also an indirect inference about why they go to certain countries.

In line with this discussion, we define the dependent variable measuring refugee movements as follows:

Net Stock of Displaced Persons = –1 (Number Hosted – Number Displaced) where Number Hosted is the Asylum Seekers in the country and Number Displaced = Emigrant Refugees + Internally Displaced.

Note that we include both refugees and internally displaced individuals, and sum them to determine the number of people who have left their homes in a given country. In addition, we include the number of asylum seekers—i.e., refugees from other countries who have sought refuge in the given country.[16] This gives us a count of net migrants, allowing us to identify countries that, in a given year, produce a net stock of forced migrants as well as those that attract a net stock of asylum seekers. This operational measure captures three dimensions of the refugee situation in a single score, thus enabling us to comment on both push and pull factors. We multiply the score by "–1" so that positive net scores represent countries that produce refugees, and negative scores represent countries that attract them. This scale is more consistent with our hypotheses than the alternative.

Independent Variables. The first concept we need to measure concerns the threat created by the state, genocide and politicide. Harff and Gurr (1988) and Fein (1993) provide lists of relevant events in the post-World War II era. Following Schmeidl (1997), we used these lists to identify country-years in which either genocide or politicide took place. We created a dummy variable coded "1" for every country-year listed in either the Harff and Gurr or the Fein articles.

The second concept is the structure of the polity. To test hypotheses related to the effect that polity structure has on perceptions of threat we employ three measures designed to identify important characteristics of regimes. The first is a democracy measure generated from Polity III and updated in Polity 98 (Jaggers and Gurr, 1995). We summed the autocracy and democracy scores in that data set to create a scale that runs from –10 to 10, with 10 being the most democratic countries and –10 being the most autocratic. We also argued that uncertainty would influence threat perceptions, and proposed in particular that uncertainty about the structure of the polity would make people more likely to flee. To measure uncertainty about the polity's future, we employ two measures. The first concerns the durability, or persistence, of the polity. This variable identifies the length of time that a particular authority pattern existed without major transformation, i.e., abrupt/major changes to polities or particular changes that take authority patterns out of distinct categories (see Gurr, 1974; Gurr et al., 1989, pp. 26–30). Second, we measure the magnitude of change within the level of democracy experienced between time *t* and time *t–1* (Ward and Gleditsch, 1998; Davenport, 1999). The variable ranges from "–16" (a large move to autocracy) to "+16" (a large move to democracy). While the measure of durability identifies the amount of stability experienced over time, this measure captures the actual magnitude of instability (once it is experienced).[17]

The next set of concepts concern the threat to integrity of the person posed by dissident behavior. We use four conflict measures first proposed by Davenport (1995) in his study of state repression. The first measure, cumulative conflict, is an additive event count. It records the number of protest demonstrations, riots, general strikes, antigovernment demonstrations, guerrilla warfare and revolution for each country-

year as reported in Banks' Cross-Polity Time Series data set. The second measure, strategic variety of conflict, is a count of the number of different types of dissident conflict behavior. It ranges from "0" to "5" depending on how many of each of the different types of protest events identified above occurred during a particular time period. Again, Banks's Cross-Polity Time Series data set was used to construct the measure. The third indicator of dissident behavior is deviance from the normal pattern of violence. The mean value for cumulative conflict is calculated over time for each country, and then years in which the value exceeds the mean are assigned a value of "1" with the remaining years receiving a score of "0." Finally, a dummy variable is created which codes the presence of violent conflict. This variable is assigned a value of "1" whenever there is at least one guerrilla warfare event, riot or revolution.

We also hypothesized that the interaction of states and dissidents would have an impact on the threat posed by the environment. Civil war is operationalized with "0" and "1" (dummy) variables that were taken from the Correlates of War Project (Singer and Small, 1994).

Next, we need to operationalize several control variables. One argument is that people are interested in maximizing their incomes and will evaluate their level of economic opportunity. If that opportunity is found wanting, and if a better alternative exists, they will be more likely to leave. Ideal operational measures for the economic opportunity concept would be wages, government welfare expenditures, etc. Unfortunately, cross-national data to measure these concepts are not widely available either spatially or temporally. As such, we chose to use per capita GNP as a proxy measure for economic security. This variable was gathered and used in connection with the Poe, Tate and Keith (1999) study. The other control variable cap-

Table 1:
Descriptive Statistics of the Variables Used in the Study

Variable	Minimum	Mean	Stand. Deviation	Maximum
Net Refugee Stocks[a]	-5,247.0	78.6	635.4	8,601.0
Emigrant Refugee Stocks[a]	0.0	87.7	412.1	6,601.0
Internal Displaced Persons[a]	0.0	65.3	356.3	4,750.0
Genocide / Politicide	0.0	0.07	0.26	1.0
Polity Change	-16.0	0.09	1.86	16.0
Democracy Score	-10.0	-1.34	7.53	10.0
Durability of Polity	0.0	22.7	23.0	91.0
Cumulative Conflict	0.0	1.88	4.66	85.0
Variety of Conflict	0.0	1.25	1.65	5.0
Violent Conflict	0.0	0.43	0.50	1.0
Deviance from Normal Conflict	0.0	0.29	0.45	1.0
Civil War	0.0	0.08	0.28	1.0
Population[b]	0.25	33.6	108.0	1,150.0
GNP per capita	35.0	2,384.3	4,170.4	33,710.0

[a]Variable measured in thousands.
[b]Variable measured in millions.

tures the phenomenon of crowding from population. We employ the population variable from Banks' Cross-Polity Time Series data set. Finally, we accept the argument that migration follows migration. Prior migration decreases the cost of subsequent activity and thus the development of relevant networks is crucial. Lacking direct indicators of this concept, we argue that this is best approximated with a lagged measure of the dependent variable.

Table 1 lists some descriptive statistics for these variables.[18]

Estimation

The venerable tool in the political scientist's chest for producing parameter estimates is OLS regression. This technique is not always appropriate, however. Emigration figures have a distribution from zero to some positive integer and display a Poisson, negative binomial, or similar distribution. To properly investigate this data one would have to employ Poisson or negative binomial regression in order to avoid improper estimation (e.g., King, 1989).[19] Net migration, on the other hand, can assume either positive, zero, or negative values and displays a normal distribution. These allow us to use OLS regression. As a consequence, parameter estimation is more straightforward using net migration figures.

In an earlier version of this article, we estimated parameters using both emigrants and internally displaced—rather than net migration—as the dependent variable. Because emigrants and internally displaced are not distributed normally, we used the "XTPOIS" command in Stata (version 6), which can perform a fixed-effects Poisson regression using PCTS data. Unfortunately, Stata cannot perform such a regression on the total sample. More specifically, it automatically removes any group of data (in our study, any country) that has a value of zero for every case. Thus, each country that produced zero emigrant refugees was deleted from the emigrant refugees regression (69 countries—1,464 cases—were deleted) and each country that produced zero internally displaced refugees was deleted from the internally displaced regression (92 countries—2,052 cases—were deleted). As such, the Poisson regression estimates are based on a biased sample of less than half of the cases. As such, we have little confidence in these parameters, and do not report them except to note that with the exception of population, each variable listed in Table 2 produces a statistically significant parameter estimate in the emigrant refugee equation, and genocide/politicide, polity change, variety of conflict, and civil war produce statistically significant parameter estimates in the internally displaced equation.[20] Thus, in addition to having a theoretical rationale for using the net migration measure, we also have a methodological one: we are unable to produce unbiased parameter estimates when we use the other measures.

The selection of the model itself is only one of the issues that we must confront. As we employ PCTS data, we also need to be concerned about both heteroskedasticity and autocorrelated errors. Stimson (1985), Sayrs (1989), and Beck and Katz (1995, 1996) have made political scientists aware of the threats to inference caused by a failure to address the methodological difficulties common when observations are collected over both space and time.

In order to estimate our models, we first explored a generalized least squares

model under the assumption of random effects (a.k.a. error components). However, Hausman (1978) specification tests indicated that the random effects assumption could not be sustained. We therefore abandoned this procedure in favor of a fixed effects least squares (a.k.a. least squares with dummy variables) approach.[21] This technique includes a dummy variable for each of N-1 countries in the analysis under the assumption that the intercept is unique for each country. That is, rather than assume that all countries will have the same net stock of forced migrants when all variables in our model have a zero value (i.e., assume that the intercept is the same for all countries), the fixed effects approach assumes that each country will have a different net stock of forced migrants when all variables in our model have a zero value. One tests this assumption using a joint-F test against the null hypothesis that the intercepts are jointly zero. As we report below, this test suggests that we should reject the null-hypothesis and use the least squares estimator with fixed effects. We examined the residuals produced using the fixed effects model, and found that they were not white noise. Visual inspection suggested that several outlier cases were responsible for the residual problem. To contend with this difficulty, we created a series of dummy variables that were coded "1" in the country-year that produced unusually large errors, and reestimated the equations. These runs produced white noise residuals, and are reported below in the next section.

RESULTS

We begin our empirical investigation with a simple descriptive analysis, the main purpose of which is to shed light on our hypothesis that refugee flows are uncommon. A frequency table (not shown because of its size) indicates that 73% of the country-years fail to produce a nonzero score for internally displaced people or external refugees. Further, 78% of the cases have a score of zero or less on the net stock variable. These findings are consistent with our contention that the transaction costs associated with relocation are substantial, and that movement across borders will be the exception rather than the norm.

Table 2 presents the results from our regression covering the years 1964–1989.[22] These results allow us to evaluate several of our hypotheses, specifically that (1) past net forced migration will positively influence present stocks; (2) genocide and politicide campaigns by the state will positively influence net forced migration; (3) the structure of the polity will influence net migration stock; (4) dissident conflict behavior will positively influence net migration stocks; (5) civil war will positively influence net forced migration stock; (6) economic opportunity will influence net migration stocks; and (7) population will influence net forced migration.

As one is able to discern from Equations 1 and 2 (Table 2),[23] the basic model performs quite well: the F-tests indicate that the specification is superior to a null model, the variance explained is high, and all but one of the variables influence the dependent variable in the anticipated direction, generally supporting our hypotheses.[24]

First, the lagged net forced migration stock variable produces a positively signed, statistically significant parameter estimate. Second, the overall stock of displaced persons is positively influenced by acts of genocide/politicide. Third, we find that

Table 2
Models Explaining Net Refugee Stocks, 1964–1989
(OLS, Fixed Effects coefficients with standard errors in parentheses)

Variables	Eq. 1	Eq. 2
Lag of Net Stock of Refugees	0.837**	0.908**
	(0.011)	(0.009)
Genocide/Politicide	67.069**	85.293**
	(17.120)	(17.533)
Polity Change	3.679*	4.460*
	(1.899)	(1.900)
Democracy Score (Polity98)	1.119	——
	(1.191)	
Durability of Polity	0.340	——
	(0.503)	
Cumulative Conflict	-0.248	——
	(1.032)	
Variety of Conflict	22.847**	9.795**
	(7.049)	(3.285)
Violent Conflict	-18.259	——
	(12.769)	
Deviance from Normal Conflict	-12.232	——
	(12.594)	
Civil War	95.196**	110.577**
	(17.569)	(17.546)
Population	2.89e-07	——
	(2.45e-07)	
GNP per capita	-0.001	——
	(0.002)	
Constant	-13.239	-18.653**
	(13.184)	(4.783)
Joint-F on dummies	1.70**	2.04**
R2	0.84	0.88
Joint-F on regressors	469.02**	1172.13**
# of observations	2957	3095
# of countries	126	128

*P < .05, **P < .01.

the variety of different types of protest events applied by dissidents increases the net stock of migration. Fourth, the civil war variable produced a positively signed, statistically significant parameter estimate. Finally, change in the polity structure produces a statistically significant, positively signed parameter estimate. We discuss each result in turn.

The first finding is consistent with the contention that the information environment lowers the transaction costs associated with relocation (e.g., Massey et al.,

1993; Schmeidl, 1995). People do not make decisions in isolation—rather, they rely on the information available in their environment to make decisions, and that information includes input from others facing similar circumstances. The information provided ranges from routes and hospitable locations to the fact that others have successfully relocated.

The strong positive coefficient of the second variable of interest, genocide and politicide, is consistent with the hypothesis that states can actively engage in behavior that raises the level of threat in the environment, forcing many to flee (similar to the work of numerous authors: Fein, 1993; Jonassohn, 1993; Schmeidl, 1995, 1997). Given that genocides and politicides represent the highest level of threat, we would have been alarmed had this variable not produced a statistically significant parameter estimate.

The third variable that was statistically significant is the number of strategies applied by state challengers. This measure is used to examine our hypothesis that escalating dissident behavior can produce a threatening environment. The more distinct types of conflict dissidents use, the more likely are individuals within the country to perceive threats and leave, and the more likely are those outside of the country to stay away. While this result is not dramatically at odds with previous work, we are unaware of any studies that specifically investigate or support this finding.

The fourth finding that fails to cast doubt on our argument is civil war, which we use to measure our contention that the interaction of state and dissident behavior has an independent impact on net migration. In addition to finding that it effects net migration, and not just emigration, what is important about our findings is that we show that state behavior, dissident behavior, and the interaction of the two all have independent effects on the net stock of migrants.

The final statistically significant parameter estimate is associated with polity change. The sign is positive, indicating that shifts toward democracy are associated with forced migration. We identified arguments that would support either a negative or positive sign for this variable, and the findings suggest that (1) shifts toward democracy produce political competition and conflict (Newland, 1993; Mansfield and Snyder, 1995; Ward and Gleditsch, 1998; Krain and Myers, 1997), (2) this is a proxy measure for changes in policies where borders that were formerly closed become open (Zolberg et al., 1989; Larrabee, 1992; Newland, 1993), or (3) both 1 and 2. Given that we also include measures of violent political conflict in the regression, it seems likely that the second explanation is more pertinent than the first.

What of the hypotheses for which we did not find support? Similar to Schmeidl (1997), we fail to find support for the hypothesis that economic threat is important: GNP per capita fails to produce a statistically significant parameter estimate. We suggest a couple of reasons why this might be the case. First, we use GNP per capita as a proxy for a number of concepts that are expected to influence one's decision: wages, social welfare programs, etc. Perhaps this measure is not a good enough proxy. On the other hand, our dependent variable focuses solely on people who have registered as refugees or are estimated to be under stress and have relocated within their country involuntarily. As a consequence, our dependent variable ignores voluntary migrants (individuals who are likely more influenced by such considerations).

The other variables that failed to produce statistically significant parameter esti-

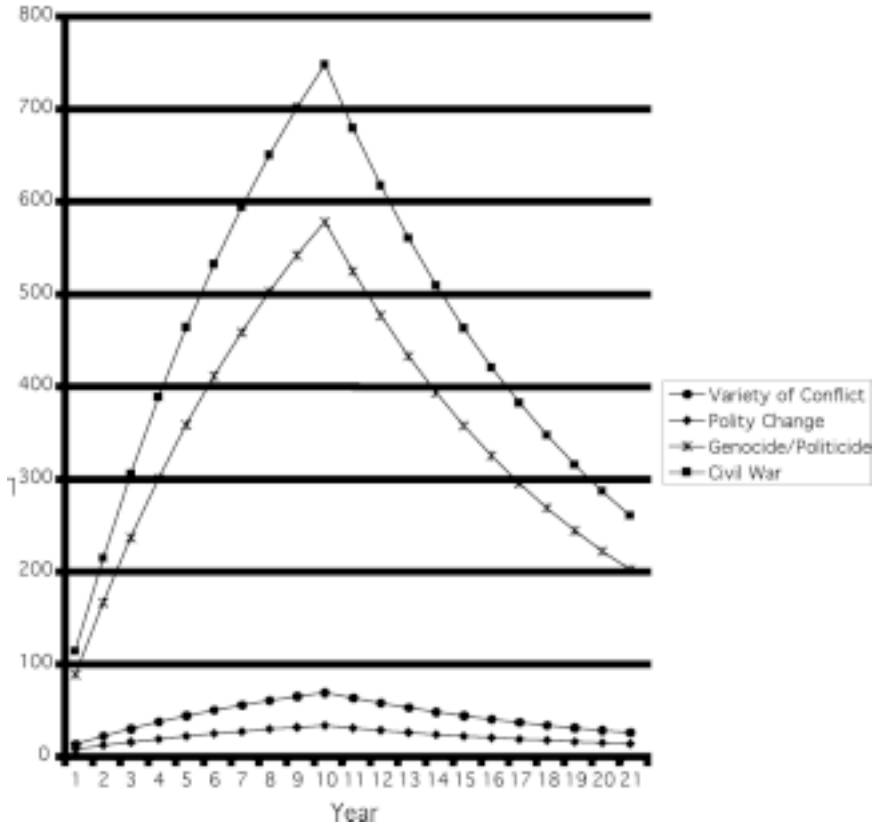
mates fall into two groups. First, there are different measures of a similar concept that produced statistically significant parameter estimates (e.g., cumulative conflict, deviance from conflict, durability of polity). The second group is made up of a single variable that we included as a control because it was suggested by other analyses: population. The insignificance of this variable surprised us (deviating from the expectations of Weiner [1996] but supporting Schmeidl [1995]) in that we anticipated that larger countries would be associated with larger forced migration. It turns out, however, that this is not the case and thus we can infer that the overall size of countries' population has basically nothing to do with the number of refugees that come from it. To explore further the relationship we regressed net stock on population and were surprised to find that there is no relationship. However, if one creates a dummy variable that simply codes whether a country produces any refugees (that is, "1" indicates one or more net forced migration is produced, while a "0" indicates less than one net forced migration produced) and regresses that variable on population, then it has a statistically significant impact. Thus, population appears to influence *whether* refugees are produced, but does not have an impact on *how many* are produced.

Our analyses give us evidence of four variables that have statistically significant effects on forced migration levels. Two vital questions remain, however: Are these effects large enough to be considered important, theoretically? And second, how large are these variables' effects relative to one another? Estimation of the theoretical import of the coefficients is complicated by our use of a lagged dependent variable in the analysis. Inclusion of such a variable means that each of the other independent variables are apt to exercise a much greater effect on the production of refugees than the coefficients reported in Table 2 indicate. Aside from the direct effects portrayed by these coefficients, however, they will also exercise indirect impacts, through their effects on the lagged dependent variable in future years. Thus, the impact of a variable in a particular year will continue to manifest itself across time.

To illustrate these complex and delayed effects, in Figure 1 we use the findings yielded by Model Two to simulate a situation where each of the statistically significant independent variables is assumed to have increased by one in the first year. The values of each variable are then assumed to stabilize at that level for a period of nine more years, before returning to their previous values. While the situation described here is unlikely, it does serve as a useful exercise for understanding the dynamics of what takes place when individuals decide to migrate amidst lagged effects (something ignored by the investigation above).

In this figure one can see that when each variable's impact is at its height, in the tenth year, civil war has the largest impact. A civil war lasting for ten years is apt to be associated with about 744,000 refugees in its tenth year, other factors held equal. A genocide or politicide occurring over the same period would be associated with about 574,000 persons choosing to flee, *ceteris paribus.*

Next in order of impact is the variety of conflict. If one type of conflict were added and maintained, this would be associated with about 66,000 refugees in the tenth year. However, perhaps a more fair baseline for comparison would be the maximum change in this variable, since this is in effect what we have used with the two dummy variables. The effect of moving from the low value ("0") to the highest



*Based on coefficients of Equation Two

Figure 1. Effects resulting from a one-unit increase in each independent variable in year 1, changing back to the original value after 10 years.

value ("5") on this variable would bring this variable's effect to about 330,000 refugees, *ceteris paribus*, in year ten. Though smaller than the effect of genocide/politicide and civil war, this finding is quite robust. The magnitude of this finding and the fact that dissidents' use of five strategies occurs more frequently than civil wars and genocide/politicides underscore our finding that refugees consider not just government activities, but those of dissidents in their decision to flee.

By contrast, the effect of a one-unit change toward democracy every year for ten years would lead to only 27,000 refugees once other factors are controlled. Some of the attributes of this variable would make it misleading to compare the maximum possible change, as we did with the others. The largest values found in our data set for the polity change variable had an absolute value of "16" (i.e., a movement from full autocracy to full democracy). Those were extremely rare events, and since the variable measures polity change, such large values could not possibly be achieved in two consecutive periods. Indeed, an inspection of the change data led us to conclude

that having even small changes in polity in two consecutive years, let alone ten as is depicted in our figure, is an extremely rare event. In a separate simulation we found that a sixteen-unit increase in polity change would result in 71,000 refugees in the first year, *ceteris paribus*. If no other polity change occurred in this instance, the effect of this change would decay to about 30,000 by the tenth year. Even though the immediate effect of this variable is substantial, the lagged impact of the largest plausible change in this variable is much smaller than those of each of the other three factors depicted in Figure 1.

A final point worthy of note is that the effect of genocide/politicide and civil war as well as a maximum change in the variety of conflict variable would be expected to linger for the entire period depicted in the figure, long after the precipitating events themselves ended.[25]

To summarize, each of our hypotheses about the importance of political threat caused by state and dissident behavior are supported. We fail to find support for our hypothesis that economic threat or other factors (such as population and GNP/capita) play a role in generating refugee movements, but have suggested that perhaps we would find different results if we used different measures that were more directly relevant to identifying noncrisis-oriented migrations. Civil wars, genocides and politicides, and the variety of threats posed by dissidents each have important impacts on the creation of forced migrants. Consistent with the idea that authoritarian governments tend to restrict efforts of persons to leave more than democratic regimes (Newland, 1993), a short-term movement toward greater democracy served to increase the refugee population somewhat.

CONCLUSION AND PROSPECTS FOR FUTURE RESEARCH

We set out to explore why people would abandon their homes in favor of an uncertain future. Our study contributes to the small but growing literature on the etiology of forced migration in three specific ways. First, it is only the second largen statistical analysis that does not suffer from some bias in either the selection of cases or the methodological technique employed. Second, by using net forced migration as a dependent variable we are able to examine both the push and pull elements driving the decision to abandon one's home, even though we use the country-year as our unit of observation. Third, we develop micro-foundations for the decision to become either a refugee or an internally displaced person, thus recognizing that some people choose to stay, either resisting or, perhaps, dying.

With the knowledge we gained held firmly in our pockets, the time is right to reflect on what should be done next. With respect to our own analysis, it would be useful to collect the data needed to employ a directed-dyadic research design that recorded information about not only the city and country of origin, but also the potential city and country of asylum. In addition, it would be useful to collect data on (1) voluntary migration (or emigration) and (2) comparative wages so that a better test of the economic pull factor could be conducted.

With respect to extensions, we believe that one worthwhile direction for future inquiry would be to focus more on yielding risk assessments, or predictions for practitioners and activists. There is a great deal of interest in the development of an early

warning capacity (e.g., Aga Khan, 1981 and Clark, 1983, 1989). Practitioners and activists might be better able to control the worst effects of future refugee situations if they were to be given more warning. Recently there has been an encouraging trend toward more scholarly attention of such questions (e.g., Gordenker, 1992; Harff and Gurr, 1998; Gurr and Moore, 1997; Apodaca, 1998, Schmeidl and Jenkins, 1998). Unfortunately, though there has been much discussion of possibilities and problems, few such warnings have been issued. Statistical models like those developed here hold promise for remedying this weakness in the literature in the near future.

An additional line of inquiry that might also prove fruitful to investigate concerns other aspects of context, which were ignored here, as well as the aftereffects of forced migration. For example, do certain aspects of political culture constrain the "exit" option by cultivating a more tolerant or more fearful society? Do cues from the international environment regarding its willingness to assist or ignore the country's domestic problem influence the likelihood of mass departure? Are states that are left more prone to collapse or, having eliminated potential challengers, more prone toward periods of successful state-building? What impact does the influx of refugees have on the receiving country's use of political repression? Is the society confronted with this in-migration compelled to open itself, thus embracing the newcomers, or is it more likely to erect societal boundaries around the recent emigrés as well as the rest of the domestic population? On these questions, we know very little.

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NOTES

1. We define these terms shortly, and beg the reader's indulgence to permit the repeated use of the phrase "forced migrant" in the interest of eliminating the unwieldy phrase "refugee and internally displaced people."
2. See Jenkins and Schmeidl (1995) for a discussion of theories upon which one might draw to produce an alternative integrative framework to the one proposed here.
3. Zolberg et al., 1989; Weiner, 1996; and Cohen and Deng, 1999 are the best idiographic and comparative case analyses of the causes of mass exodus.
4. We do not wish to suggest that the phrases "push" and "pull" are unproblematic (see Bernard, 1976; Richmond, 1993). Given the porosity of state borders and the importance of globalization, rather than think about these as dichotomous options, it is better to think of them along a continuum.
5. For example, she considers the existence of cross-border ethnic populations and geographic complexity/difficulty.
6. This a heuristic tool, not a description of any person's actual decision process.

7. One might argue that people can also choose to abandon their property and take up arms against the state or the dissidents. For the purpose of simplification, this choice is contained in the "don't abandon one's property and migrate" decision.
8. Many scholars argue that international wars (i.e., what we might call state-state conflict, in our typology) produce refugee flows. This is certainly a compelling argument, but it turns out that when we included war as a variable in the analyses reported below, it did not produce a parameter estimate that was anywhere near statistically significant. We suspect that this is an artifact of our temporal sample, 1965–1991.
9. We should note that the underlying logic of this argument is different from the underlying logic of the other two points regarding the possible impact of a change in polity. Whereas the first two focus on the change as an informational cue, this argument suggests that change in polity is, in effect, a proxy measure for a change in emigration policy.
10. On the problem of selection bias see King et al. (1994, pp.128–149). See Jackman (1985) for a useful discussion of the importance of considering temporal and spatial variance when designing comparative studies.
11. Monty Marshall collected the data from USCR reports and was kind enough to share it with us. Data is missing for the years 1973, 1975, and 1979. We used SPSS's Replace Missing Values routine (with the "mean of nearby points, n = 2" option) to fill in these missing data. The data are measured in the thousands in our dataset. Schmeidl (1995) spends a great deal of time discussing the positive and negative aspects of using different data sources on forced migration and thus we defer individuals to her study for a more thorough assessment. One important limitation that we did consider was the fact that USCR used a more encompassing definition of refugees before 1980 and modified it after this time. We included a dummy variable representing this change and found that while refugee estimates were lower in the later time period (i.e., the dummy variable was significant and negative), there were no substantive alterations in the findings reported here.
12. For a discussion of this selection bias (or censored data) problem, see King et al. (1994, pp. 129–135). Achen (1986, pp. 73–81) describes the negative consequences of using censored data in regression.
13. We admit that in many instances these movements are aided by others (i.e., the UNHCR) and that often the choice is constrained by circumstance to one or a very few countries.
14. We are presently working on building just such a data set.
15. By definition, internally displaced persons do not cross international borders. Ultimately, it would be interesting to model the decision as a two-stage process where the decision to leave is the first stage and the decision to become an internally displaced person or to cross an international border is the second stage. Doing so would require a substantial data collection effort and is beyond the scope of this study. However, we are presently engaged in just such an effort and plan to study this question in future analyses.
16. As noted briefly in the introduction, there is both a theoretical reason for using net migration and an estimation rationale.
17. This measure differs from the durability measure in that it captures both small changes (of one or two points) as well as larger changes (which would be caught within the durable measure). The two do not correlate with each other in a substantive manner.
18. Some readers have expressed concern about multicollinearity among our independent variables. Interestingly, this is not an issue in our data set. We do not present a correlation matrix, but there are only three pairs of variables with a correlation above .5: durability of polity and GNP/capita (.50); variety of conflict and cumulative conflict (.64); and violent conflict and variety of conflict (.78). Thus, the variables behave as they were designed to behave: they measure distinct and salient features of the environment in which people live, and provide distinct and apparently important information about the perceived risks associated with remaining in that environment.
19. Migration flows are events that are not likely independent of each other, and thus have a distribution unlike what is appropriate for OLS regression. Such an application can lead to estimation that is inefficient, biased, and/or inconsistent. Borrowing from Krain (2001, p. 19):

> OLS does not account for the unique properties inherent in counts of events. For example, one cannot observe a negative number of events. Yet OLS regression models assume that negative integers are part of the normal distribution of events. The answers that one gets using OLS are

therefore not just inefficient, but are also substantively meaningless.

20. These results are available in the replication data set that will be deposited with the ICPSR's publication related archive.
21. We used Stata to estimate parameters. The "XTREG" command, with the "fe" option, was used to estimate the fixed-effects model. The "XTREG" command, with the "re" option, was used to estimate the random-effects model. We only report the fixed effects estimates.
22. In a previous version of this paper (Davenport et al., 1999) we reported the findings of analyses conducted on a smaller temporal domain that included a number of alternative measures of the concepts and relationships tested here. In these analyses we found that instances of personal integrity abuse less serious than genocide were not related to refugee flows. Nor were Marxist and Military Regimes, or international wars found to significantly influence movements of refugees.
23. We reestimated the equation dropping the variables that were not statistically significant, and report those results as well.
24. As noted above, we identified a number of country-years that were outliers and included dummy variables to capture their effect. Nigeria, 1968; India, 1970 and 1971; South Africa, 1985; and Angola, 1987 all produced large positive errors, indicating that our model underpredicted the net stock for those country years. Nigeria (1970) produced a large negative residual, indicating that our model over-predicted the net stock for those country years. We included dummy variables for each of these country-years.
25. A caveat regarding the accuracy of the simulation is that we do not (and cannot) account for deaths in the refugee population that naturally occur as time passes.

REFERENCES

Achen, Christopher (1986). *The Statistical Analysis of Quasi-Experiments*, Berkeley: University of California Press.

Aga Khan, S. (1981). *Study on Human Rights and Massive Exodus,* Special Report to the Commission on Human Rights, 38th session, United Nations Economic and Social Council, UN Doc E/CN.4/1503.

Amnesty International (1977–1993). *Amnesty International Report,* London: Amnesty International Publications.

Apodaca, Clair (1998). "Human Rights Abuses: Precursor to Refugee Flight?" *Journal of Refugee Studies,* Vol. 11, pp. 80–93.

Banks, Arthur (1998). *The Cross-Polity National Survey,* Binghamton: Department of Political Science.

Beck, Nathaniel and Jonathan N. Katz (1995). "What To Do (and Not To Do) with Time-Series–Cross-Section Models," *American Political Science Review*, Vol. 89, pp. 634–647.

Beck, Nathaniel and Jonathan N. Katz (1996). "Nuisance vs. Substance: Specifying and Estimating Time-Series–Cross-Section Models." *Political Analysis,* Vol. 6, pp. 1–36.

Bennett, Jon (1998). "Forced Migration Within National Borders: The IDP Agenda." *Forced Migration Review,* Vol. 1, p. 1 (http://www.fmreview.org/1frames.htm).

Bernard, William (1976). "Immigrants and Refugees: Their Similarities, Differences, and Needs." *International Migration Review,* Vol. 14(4), pp. 267–281.

Carmack, Robert (1988). *Harvest of Violence: The Maya Indians and the Guatemala Crisis*, Norman: University of Oklahoma Press.

Clark, L. (1983). *Early Warning of Refugee Mass Influx Emergencies,* Washington, D.C.: Refugee Policy Group.

Clark, L. (1989). *Early Warning of Refugee Flows,* Washington, D.C.: Refugee Policy Group.

Cohen, Roberta and Francis Deng (1998). *Masses in Flight: The Global Crisis of Internal Displacement,* Washington, D.C.: The Brookings Institution.

Davenport, Christian A. (1995). "Multi-Dimensional Threat Perception and State Repression: An Inquiry Into Why States Apply Negative Sanctions." *American Journal of Political Science,* Vol. 39, pp. 683–713.

Davenport, Christian A. (1999). "Human Rights and the Democratic Proposition," *Journal of Conflict Resolution,* Vol. 43, pp. 92–116.

Davenport, Christian A., Will H. Moore, and Steven C. Poe (1999). "Sometimes You Just Have to Leave: Domestic Threats and Refugee Movements, 1964–1989. Paper presented at the Annual Meeting of the American Political Science Association, Atlanta, GA, 1–5 September.

Eckstein, Harry and Ted Gurr (1975). *Patterns of Authority: A Structural Basis For Political Inquiry*, New York: Wiley.

Edmonston, B. (1992). "Why Refugees Flee: An Analysis of Refugee Emigration Data." Paper presented at the Annual Meeting of the Social Science History Association.

Europa Publications (1976–1994). *The Europa Year Book*, London: Europa Publications.

Fein, Helen. (1993). "Accounting for Genocide After 1945: Theories and Some Findings." *International Journal on Group Rights*, Vol. 1, pp. 79–106.

Finer, Samuel Edward (1997). *The History of Government from the Earliest Times,* New York: Oxford.

Gastil, Raymond D. (1980). *Freedom in the World: Political Rights and Civil Liberties 1980,* New Brunswick, N.J.: Transaction Books.

Gibney, Mark and Mathew Dalton (1997). "The Political Terror Scale," in D.L. Cingranelli, ed., *Human Rights and Developing Countries*, Greenwich: JAI Press.

Gibney, Mark Claire Apodaca and J. McCann (1996). "Refugee Flows, the Internally Displaced and Political Violence (1908–1993): An Exploratory Analysis." In Alex Schmid, ed., *Whither Refugee? The Refugee Crisis: Problems and Solutions,* Leiden: Ploom.

Goldstein, Robert (1983). *Political Repression in 19th Century Europe*, Totowa: Barnes and Noble Books.

Gordenker, Leon (1992). "Early Warning of Disastrous Population Movement." *International Migration Review*, Vol. 20(2), pp. 170–189.

Gurr, Ted Robert (1974). "Persistence and Change in Political Systems, 1800-1971." *American Political Science Review*, Vol. 68, pp. 1482–1504.

Gurr, Ted Robert (1993). *Minorities at Risk A Global View of Ethnopolitical Conflict,* Washington, D.C.: U.S. Institute of Peace.

Gurr, Ted Robert and Will H. Moore (1997). "Ethnopolitical Rebellion: A Cross-Sectional Analysis of the 1980s with Risk Assessments for the 1990s." *American Journal of Political Science*, Vol. 41, pp. 1079–1103.

Gurr, Ted Robert, Keith Jaggers and Will H. Moore (1989). *Polity II Codebook,* photocopy, University of Colorado.

Hakorirta, Harto (1986). Third World Conflicts and Refugeeism: Dimensions, Dynamics, and Trends of the World Refugee Problem. Helsinki: Finnish Society of Sciences and Letters.

Harff, Barbara and Ted Robert Gurr (1988). "Toward Empirical Theory of Genocides and Politicides: Identification and Measurement of Cases since 1945." *International Studies Quarterly*, Vol. 32, pp. 359–371.

Harff, Barbara and Ted Robert Gurr (1998). "Systematic Early Warning of Humanitarian Emergencies." *Journal of Peace Research,* Vol. 35(5), pp. 551–579.

Hausman, J. A. (1978). "Specification Tests in Econometrics." *Econometrica*, Vol. 46, pp. 1251–1271.

Jackman, Robert W. (1985). "Cross-National Statistical Research and the Study of Comparative Politics." *American Journal of Political Science*, Vol. 29, pp. 161–182.

Jaggers, Keith and Ted Robert Gurr (1995). "Tracking Democracy's Third Wave with the

Polity III Data." *Journal of Peace Research*, Vol. 32, pp. 469–482.
Jenkins, J. Craig and Susanne Schmeidl (1995). "Flight From Violence: The Origins and Implications of the World Refugee Crisis." *Sociological Focus*, Vol. 28, pp. 63–82.
Jonassohn, K. (1993). "Prevention Without Prediction." *Holocaust and Genocide Studies,* Vol. 7, pp. 1–13.
Karatnycky, Adrian, ed. (1999). *Freedom in the World: The Annual Survey of Political Rights and Civil Liberties, 1998–1999,* New Brunswick: Transaction Publishers.
King, Gary (1989). "Event Count Models for International Relations: Generalizations and Applications." *International Studies Quarterly,* Vol. 33, pp. 123–147.
King, Gary, Robert O. Keohane and Sidney Verba (1994). *Designing Social Inquiry*, Princeton: Princeton University Press.
Krain, Mathew. (1997). "State-Sponsored Mass Murder: A Study of the Onset and Severity of Genocides and Politicides." *Journal of Conflict Resolution*, Vol. 41, pp. 331–360.
Krain, Matthew (2001). *Repression and Accommodation in Post-Revolutionary States.* New York: St. Martin's.
Krain, Matthew and Marissa Myers (1997). "Democracy and Civil War: A Note on the Democratic Peace Proposition." *International Interactions*, Vol. 23, pp. 109–118.
Kritz, Mary M., Charles B. Keely and Silvano M. Tomasi, ed. (1981). *Global Trends in Migration: Theory and Research on International Population Movements,* Staten Island, N.Y.: Center for Migration Studies.
Kunz, Egon (1981). "Exile and Resettlement: Refugee Theory," *International Migration Review,* Vol. 15(1), pp. 42–51.
Larrabee, F. Stephen (1992). "Down and Out in Warsaw and Budapest: Eastern Europe and East-West Migration." *International Security*, Vol. 16, pp. 5–33.
Mansfield, Edward, and Jack Snyder (1995). "Democratization and the Danger of War." *International Security*, Vol. 20, pp. 5–38.
Mason, T. D., and D. Krane (1989). "The Political Economy of Death Squads: Toward a Theory of the Impact of State-Sanctioned Terror." *International Studies Quarterly*, Vol. 33, pp. 175–198.
Massey, Douglas S. (1988). "Economic Development and International Migration in Comparative Perspective." *Population and Development Review*, Vol. 14(3), pp. 383–413.
Massey, Douglas S. (1990). "The Social and Economic Origins of Immigration." *Annals of the American Academy of Political and Social Science*, Vol. 510, pp. 60–70.
Massey, Douglas S. and Garcia Espana (1987). "The Social Process of International Migration" *Science*, Vol. 237, pp. 733–738.
Massey, Douglas S., Joaquin Arango, Graeme Hugo, Ali Kouaouci, Adela Pellegrino, and J. Edward Taylor (1993). "Theories of International Migration: A Review and Appraisal." *Population and Development Review*, Vol. 19, pp. 431–466.
McCamant, John (1981). "A Critique of Present Measures of 'Human Rights Development' and an Alternative." In Ved Nanda, James Scarritt, and George Shepherd, eds. *Global Human Rights: Public Policies, Comparative Measures and NGO Strategies,* Boulder, C.O.: Westview Press.
Morrison, Andrew R. (1993). "Violence or Economics: What Drives Internal Migration in Guatemala?" *Economic Development and Cultural Change*, Vol. 41, pp. 817–831.
Morrison, Andrew R. and Rachel A. May (1994). "Escape from Terror: Violence and Migration in Post-Revolutionary Guatemala." *Latin American Research Review*, Vol. 29, pp. 111–133.
Newland, Kathleen (1993). "Ethnic Conflict and Refugees." *Survival*, Vol. 35, pp. 81–101.
Poe, Steven C., and C. Neil Tate (1994). "Repression of Human Rights to Personal Integrity in the 1980s: A Global Analysis." *American Political Science Review*, Vol. 88, pp. 853–872.

Poe, Steven C., C. Neal Tate and Linda Camp Keith (1999). "Repression of the Human Right to Personal Integrity Revisited: A Global Cross-National Study Covering the Years 1976–1993," *International Studies Quarterly*, Vol. 43, pp. 291–313.

Poe, Steven C., C. Neal Tate, Linda Camp Keith, and Drew Lanier (1996). "Domestic Threat and the Abuse of Human Rights to Personal Integrity." Paper presented at the Annual Meeting of the Midwest Political Science Association, Chicago.

Poe, Steven C., Tanya Vazquez, and Sabine Zanger (1998). "How Are These Pictures Different? An Empirical Comparison of the U.S. State Department and Amnesty International Human Rights Reports, 1976–1995." Paper presented at the annual meeting of the International Studies Association, Minneapolis.

Rasler, Karen A. (1986). "War, Accommodation, and Violence in the United States, 1890–1970." *American Political Science Review*, Vol. 80, pp. 921–945.

Richmond, Anthony (1993). "Reactive Migration: Sociological Perspectives on Refugee Move ments." *Journal of Refugee Studies,* Vol. 6(1), pp. 7–24.

Rummel, Rudolph J. (1997). *Power Kills*, New Brunswick, N.J.: Transaction Publishers.

Sayrs, Lois (1989). *Pooled Time Series Analysis*. Sage University Paper series on Quantitative Applications in the Social Sciences, series no. 07-070, Newbury Park, C.A.: Sage.

Schmeidl, Susanne (1995). *From Root Cause Assessment to Preventative Diplomacy: Possibilities and Limitations of an Early Warning Forced Migration System*. Unpublished dissertation, The Ohio State University.

Schmeidl, Susanne (1997). "Exploring the Causes of Forced Migration: A Pooled Time-Series Analysis, 1971–1990." *Social Science Quarterly*, Vol. 78, pp. 284–308.

Schmeidl, Susanne (1998). "Comparative Trends in Forced Displacement: Refugees and IDPs, 1964–96." in J. Hampton, ed., *Internally Displaced People: A Global Survey*, London: Earth Scan Publications, pp. 24–33.

Schmeidl, Susanne and J. Craig Jenkins (1998). "The Early Warning of Humanitarian Disasters: Problems in Building an Early Warning System." *International Migration Review,* Vol. 26, pp. 471–486.

Singer, J. David and Melvin Small (1994). *Correlates of War Project: International and Civil War Data, 1816–1992*, Ann Arbor, Michigan: Inter-university Consortium for Political and Social Research.

Stanley, William (1987). "Economic Migrants or Refugees from Violence? A Time Series Analysis of El Salvadoran Migration to the United States." *Latin American Research Review*, Vol. 22(1), pp. 132–155.

Stimson, James A. (1985). "Regression in Space and Time: A Statistical Essay." *American Journal of Political Science*, Vol. 29(4), pp. 914–947.

Stohl, Michael (1976). *War and Domestic Political Violence: The American Capacity for Repression and Reaction*, Beverly Hills, C.A.: Sage.

Stohl, Michael and David Carleton (1985). "The Foreign Policy of Human Rights: Rhetoric and Reality from Jimmy Carter to Ronald Reagan." *Human Rights Quarterly*, Vol. 7, pp. 205–229.

Stohl, Michael and George Lopez, eds. (1983). *The State as Terrorist: The Dynamics of Government Violence and Repression*, Westport, C.T.: Greenwood Press.

Stohl, Michael, David Carleton, George Lopez, and Stephen Samuels (1986). "State Violation of Human Rights: Issues and Problems of Measurement." *Human Rights Quarterly* Vol. 8(4), pp. 592–606.

Taylor, Charles and David Jodice (1983). *World Handbook of Political and Social Indicators III,* New Haven, C.T.: Yale University Press.

Tolnay, S. E., and E. M. Beck (1992). "Racial Violence and Black-Migration in the American South, 1910 to 1930." *American Sociological Review*, Vol. 57, pp. 103–116.

UNHCR (1999a). "Who is a Refugee?" http://www.unhcr.ch/un&ref/who/whois.htm, viewed 17 November 1999.
UNHCR (1999b). "Rwanda Refugee Return Operation Fact Sheet." http://www.unhcr.ch/fdrs/gr98/rwa.htm, viewed 3 August 1999.
UNHCR (n.d.) "Internally Displaced Persons." http://www.unhcr.ch/issues/idp/idp.htm, viewed 13 June 2000.
USCR. (1999). World Refugee Survey, 1999, Washington, D.C.: United States Committee for Refugees.
U.S. State Department (1977–1994). *Country Reports on Human Rights Practices.* Washington D.C.: U.S. Government Printing Office.
Van de Berghe, Pierre (1990). *State Violence and Ethnicity*, Colorado: University Press of Colorado.
Ward, Michael and Kristian Gleditsch (1998). "Democratizing for Peace," *American Political Science Review*, Vol. 82(March), pp. 51–61.
Weiner, Myron (1992/93). "Security, Stability, and International Migration." *International Security*, Vol. 17, pp. 91–126.
Weiner, Myron (1996). "Bad Neighbors, Bad Neighborhoods: An Inquiry into the Causes of Refugee Flows." *International Security*, Vol. 21, pp. 5–42.
Weiner, Myron and Rainer Munz (1997). "Migrants, Refugees and Foreign Policy: Prevention and Intervention Strategies," *Third World Quarterly*, Vol. 18, pp. 25–51.
Wood, W. (1994). "Forced Migration: Local Conflict and International Dilemmas." *Annals of the Association of American Geographers*, Vol. 84(4), pp. 607–634.
Yap, Lorene (1977). "The Attraction of Cities: A Review of the Migration Literature." *Journal of Development Economics*, Vol. 4, pp. 239–264.
Zakaria, Fareed (1997). "The Rise of Illiberal Democracy." *Foreign Affairs*, Vol. 76, pp. 22–43.
Zavark, Alvan (1967). *Principales Patrones de Migracion Interna en Guatemala, 1964*, Guatemala City: Seminario de Integracion Social Guatemalteca, Ministero de Educacion.
Zinnes, Dina A. (1976). "The Problem of Cumulation," in James N. Rosenau, ed., *In Search of Global Patterns*, New York: Free Press.
Zolberg, Aristide R., Astri Suhrke and Sergio Aguayo (1989). *Escape from Violence: Conflict and the Refugee Crisis in the Developing World,* New York: Oxford University Press.
Zottarelli, Lisa K. (1999). "Refugee Production: An Exploration of Cold War and Post-Cold War Eras." Unpublished manuscript.

APPENDIX I: COUNTRIES IN THE STUDY

United States	Romania	Libya
Canada	Soviet Union	Sudan
Cuba	Finland	Iran
Haiti	Norway	Turkey
Dominican Republic	Sweden	Iraq
Jamaica	Denmark	Egypt
Trinidad & Tobago	Mali	Syria
Mexico	Senegal	Lebanon
Guatemala	Benin	Jordan
Honduras	Mauritania	Israel
El Salvador	Niger	Saudi Arabia
Nicaragua	Ivory Coast	Yemen Arab Republic

Costa Rica
Panama
Colombia
Venezuela
Ecuador
Peru
Brazil
Bolivia
Paraguay
Chile
Argentina
Uruguay
United Kingdom
Ireland
Netherlands
Belgium
France
Switzerland
Spain
Portugal
German Federal Republic
German Democratic Republic
Poland
Austria
Hungary
Czechoslovakia
Italy
Albania
Yugoslavia
Greece
Cyprus
Liberia
Sierra Leone
Ghana
Togo
Cameroon
Nigeria
Gabon
Central African Republic
Chad
Congo
Zaire
Uganda
Kenya
Tanzania
Burundi
Rwanda
Somalia
Djibouti
Ethiopia
Angola
Mozambique
Zambia
Zimbabwe
Malawi
South Africa
Botswana
Madagascar
Mauritius
Morocco
Algeria
Tunisia
Yemen People's Republic
Kuwait
United Arab Emirates
Oman
Afghanistan
China
Mongolia
Taiwan
North Korea
South Korea
Japan
India
Bhutan
Pakistan
Bangladesh
Burma (Myanmar)
Sri Lanka
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Cambodia
Laos
North Vietnam
Malaysia
Singapore
Philippines
Indonesia
Australia
New Zealand
Papua New Guinea

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