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POLITICAL CONFLICT AND MIGRATION: How has Violence and Political Instability Affected Migration Patterns in Nepal?

Nathalie Williams

Meeta S. Pradhan

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Nathalie Williams (*natw@umich.edu)*
Meeta S. Pradhan (*meetasp@umich.edu)*

Population Studies Center,
Department of Sociology
University of Michigan

INTRODUCTION

While violent political conflicts rage around the world, social science researchers are attempting to better understand why they happen, and their consequences on civilians, their communities, and the countries in which they live. We know that macro-level violence directly causes high death tolls, injuries and disabilities, malnutrition, increased spread of diseases, trauma and other psychological disorders, and destruction of property (Sköns 2006; Mack 2005; Ghoborah et al. 2004; Hoeffler and Reynal-Querol 2003; Krug et al. 2002; Collier 1999; Smallman-Raynor and Cliff 1991; Anderson and Silver 1985;). However, we have less understanding of the long-term and indirect consequences of political conflict. In reality, political conflict not only acts on civilians, but may also change how civilians themselves act. These behavioral changes in the general population are an important dimension of the long-term social change of post-conflict societies. This project is motivated by an attempt to understand how civilians perceive and react to political conflict and the long-term consequences that this social change may entail.

Towards this end, this paper focuses on one important behavioral response to conflict—migration. Compared to migration during times of relative peace, migration streams during conflict are large, sudden, and migrants are arguably less prepared for life at their destinations. Research has shown that large groups of refugees or internally displaced persons (IDPs) have considerable impacts on the social, economic, environmental, and political status of their destinations (Chambers 1986; Harrell-Bond 1985). There is also evidence that the process of migration has significant effects on the lives of migrants themselves, in shaping family relationships, affecting economic resources and livelihood strategies, and encouraging the spread of new ideas and attitudes (Durand et al. 1996; Donato 1993; Massey 1988; Stark and Lucas 1988).

Evidence consistently shows that conflict affects migration on an aggregate level (Moore and Shellman 2004; Davenport, Moore, and Shellman 2003; Schmeidl 1997; Gibney, Apodaca, and McCann 1996; Weiner 1996; Edmonston 1992; Zolberg, Suhrke, and Aguayo 1989). However, we understand little about the individual-level, or why, when, and who is likely to migrate during conflict. In addition, there is almost no theoretical or empirical treatment of an equally important phenomenon—non-migration during conflict. In recent conflicts, even amongst the most severe such as those in Iraq and Afghanistan, the majority of the population has not migrated away from the violence. This is also the case in Nepal during the recent Maoist insurrection. Thus in only studying those who migrate away from conflict, we are ignoring the majority of the population and the reasons they do not migrate away.

A clearer and more comprehensive understanding of these questions would allow us to better predict when and where to expect large groups of migrants during periods of conflict. This is not simply a theoretical exercise, but can inform better policies and planning to accommodate these people in urban areas, IDP and refugee camps. Furthermore, a better understanding of the systematic redistribution of a population during a conflict can provide insights into the resulting long-term social changes that will characterize a post-conflict society into the future.

In this study, we develop a new theoretical framework to understand out-migration from conflict affected areas. Departing from much of the literature that treats conflict as a single and

homogenous event, we evaluate how specific violent and political events, such as major gun battles, bomb blasts, political instability, ceasefires, and strikes and protests have different effects on migration and non-migration. Furthermore, going beyond previous work that treats potential migrants as a homogenous group with little agency to make decisions, we address how men and women may experience these same events differently and the resulting gender differences in migration responses. This individual, event-centered, and gendered approach to the study of conflict and migration provides the opportunity to better understand individual variability in migration and non-migration patterns as a whole.

We use the recent Maoist insurrection in Nepal as a case study to empirically investigate this theoretical framework. A unique combination of data, including records of violent events, political events, and demographic data from a prospective panel survey of individuals, make direct empirical documentation of these relationships possible. The individual panel survey from Nepal spans the entire period of conflict and provide recordss of individuals' migrations on a monthly basis, thereby allowing precise comparisons between violent and political events each month and out-migration. Because these data cover the period of time from three years before the insurrection began, through the six years of the conflict, they provide an unprecedented opportunity to investigate differences in migration patterns during times characterized by armed conflict and by relative peace.

THEORETICAL FRAMEWORK
Although the study of migration during conflict has advanced significantly in the last few decades, both theory and empirical studies are still largely focused on aggregate groups. This aggregate focus functionally disregards the agency of individuals to make migration decisions depending upon their individual circumstances. Furthermore, conflict is often conceptualized as one homogenous event, instead of a series of violent and political events that can disrupt individuals' physical safety as well as economic, social, and psychological well-being. This leaves an incomplete picture of the complex interactions between armed conflict, individuals, and the communities within which they live. Here, we briefly discuss the standard threat-based decision model of forced migration studies. Building on this approach, we then propose a multi-dimensional model of individual migration behavior that is based on a broader social-ecological understanding of how individuals experience and respond to the violence and political events that comprise periods of conflict.

The threat-based decision model is the dominant explanatory model of forced migration and the only theory that has been empirically tested in the literature. This model argues that potential migrants base their decision to migrate away from a conflict on the perceived threat to their personal security. When the perceived threat to their security increases beyond an acceptable level, they migrate away. This model is explained in further detail in Davenport, Moore, and Poe (2003) and Moore and Shellman (2004). Recent empirical studies have found strong support for this theory. Several country-level comparative studies have found that a variety of types of generalized violence result in large increases in migration out of the afflicted area (i.e. refugee flight), including civil war, international war, genocide and politicide, and human rights violations (Melander and Oberg 2006; Moore and Shellman 2004; Davenport et al. 2003; Apodaca 1998; Schmeidl 1997; Gibney, Apodaca, and McCann 1996; Weiner 1996; Edmonston 1992;Clark 1989; Zolberg, Suhrke, and Aguayo 1989; Stanley 1987;). The outcome

of these studies is that there is strong and consistent evidence that people flee from generalized violence.

The threat-based decision model however is designed to understand the migration patterns of aggregate groups. It is less helpful in understanding individual behavior. This is in part because the model adopts a largely structuralist perspective to explain how the macro-level context—armed conflict—determines micro-level behavior—migration. It functions under the general assumption that armed conflict places absolute constraint (and thereby lack of agency) on the behavioral choices of the individual, regardless of their individual or community circumstances. It is precisely through this assumption that people have no choice in the context of conflict that we use the term 'forced migration'. Because this model does not consider individual agency and the complexity of the migration decision at the individual level, it is not able to explain the individual variability in migrants leaving or not leaving, any given conflict.

In addition, this model references only physical threat as a mechanism through which conflict motivates people to migrate. It does not address the economic, social, or political consequences of conflict on civilian lives and livelihoods. Independent of the physical threat, these disruptions of economic, social, and political life could also be important mechanisms that motivate people to migrate (Avogo and Agadjanian 2008).

Violent Events
Based on the forced migration literature, we understand that violence increases the perceived threat to people's well-being. For this reason, people migrate away in order to remove themselves from this threat (Davenport, Moore, and Poe 2003; Moore and Shellman 2004). However, the process of migrating or travelling, which includes being outside the home and the community and in less familiar surroundings, exposes people to the violence they are seeking to escape. Furthermore, migration is only a logical choice to protect one's safety if they are able to migrate fully out of the conflict zone.

Another option to decrease one's exposure to violence is to consciously choose not to migrate. In doing so, people continue to be exposed to the possibility of violence in their own community, but they do not expose themselves to the danger of violence while travelling. This option is also less costly to the individual and family. There is evidence of this type of precautionary behavior in dangerous neighborhoods in the US. Several studies find that when faced with increased danger in the neighborhood, adults and elderly people remain home more often, participate in community activities less, and children spend less time playing outside (Mesch 2000; Keane 1998; Rountree and Land 1996; Liska, Sanchirico, and Reed 1988; Warr 1984).

These two precautionary behaviors (migrating away and staying at home more) at first seem quite opposite and there is no clear connection between the literature on each of these responses as to why individuals may choose one over the other. Here we propose one reason for this discrepancy—the decision whether it is safer to migrate or to not migrate and stay at home could depend largely on the level of violence. At lower levels of violence, the safest option could be to stay within one's own home and community, rather than to be outside where the violence is mainly occurring. However, at higher levels of violence, people could feel threatened

even in their own homes and communities. In this case, the safest option would be to migrate away. This implies that there is a threshold level of violence, or a certain level of violence at which people decide that staying at home is no longer a safe option. Hurricanes provide a useful analogy to this discussion. When a low to medium strength hurricane is predicted, people are advised to stay within the protection of their own homes, rather than to be outside where they will be exposed to the storm. However, when a very large hurricane is expected, people are advised that they will not be safe within their homes, and thus it is safer to evacuate the area.

Therefore, during periods of *low* levels of violence, we predict a lower rate of migration compared to periods of relative peace. During periods of *high* levels of violence, we predict a higher level of migration.

Political Events
In addition to violent events, there are a number of political events that can occur during armed conflict that also disrupt people's lives. These events can include changes to the government, prime minister or other high officials, complete collapse of the government, states of emergency, ceasefires, and major strikes or protests. These events of political instability can decrease the sense of security and authority at all levels on which people depend, creating a sense of anomy, chaos, or anarchy. Political instability, or lack of political and legal control, can also signal the possibility of violence in the future. In addition, these types of events can affect the economy through decreasing foreign investment and internal and external trade (Bundervoet and Verwimp 2005; Mack 2005; Collier 1999; Collier and Gunning 1995;). During conflicts, commodity prices often increase and household livelihoods can be threatened (Justino 2006; Verpoorten 2005; Mack 2005; Gebre 2002).

As a result, we predict that events of political instability will increase migration. People can migrate as a precautionary behavior, to avoid the possibility of future danger. They can also migrate as a reactionary behavior, in response to a worsening economy and increasing constraints on their livelihoods. On the other hand, we predict that ceasefires, which signal increased political security and a possible end to the conflict, will decrease migration.

Major strikes and protests are a special kind of event. In contexts such as Nepal during the period of the Maoist insurrection, strikes and protests are often planned well before the event. Thus we would expect people to migrate in anticipation *before* the event actually occurs. People who want to participate in the event, will migrate (temporarily) to join such protests in different parts of the country (usually in urban areas). Reports indicate that this was the case in Nepal, where some people participated voluntarily and in other cases, the Maoists and other political parties often used coercion and demanded participation from each household in such events. Bus loads of such 'participants' would then attend rallies in different places. In addition, because information about strikes and protests was usually available prior to the event, people could anticipate the violent, political, or economic consequences of strikes or protests and migrate away to avoid this. In this case, because they know before the event occurs, we would expect these people also to migrate before the event.

Gender Differences in Response to Violent and Political Events
Different individuals are likely to experience and respond to these violent and political events in different ways. One of the benefits of studying migration during conflict on an individual-level is the ability to address individual variability in migration based on specific individual- and community-level characteristics. In this study, we concentrate on gender differences in migration during conflict.

Men and women are likely to respond to conflict differently for two specific reasons: 1) they experience different rates of actual victimization and risk, and 2) they have different cognitive processing of fear of victimization. In many conflicts, including the Maoist insurrection in Nepal, men are specifically targeted in assault, abduction, imprisonment, and forced conscription more than women. The knowledge that they are at higher risk of these physical threats can lead men to have higher rates of fear of *violent* events and subsequently higher likelihood of adopting precautionary behaviors such as migration to remove themselves from the threat of *violence*.

On the other hand, psychological research has shown that women cognitively process fear of victimization differently from men (Rountree and Land 1996; Warr 1984). Evidence shows that given similar perceptions of their expected risk of victimization, women have higher levels of fear than men. This could be for several reasons, including that women are socialized to believe that they are more vulnerable, less able to control their situation, and less able to cope with psychological stress induced by violence (Skogan and Maxfield 1981; Warr 1984). Because women are generally more fearful of any given situation than men, we would expect women to be more likely to adopt precautionary behaviors to remove themselves from threat imposed by *political and violent* events.

Based on the above discussion, in the case of violent events, we predict no gender difference in migration responses to violent events. While men are more likely to be at actual risk of danger, women are likely to perceive more danger from lower levels of actual risk. As a result, we would expect men and women to have similar levels of fear of violent events and thus similar rates of precautionary migration.

In the case of political instability, we predict that women will have higher rates of migration than men. Political instability and the resulting economic changes disrupt men's and women's lives to the same extent; neither sex is at higher risk. However, women are likely to perceive these events with more fear than men. For this reason, we can expect women to migrate in response more often then men.

CONTEXT AND SETTING
The Maoist Insurrection
The context of this study is the Maoist insurrection in Nepal which began in 1996. The Maoist movement was born during a period of general government instability and inefficacy. In 1990, the change in governance to a Constitutional Monarchy with a democratically elected multiparty parliament system marked the beginning of this period of instability of the seat of the government. Between the decade of 1990 and 2000, there were as many changes in the government in as many years. Following a relatively unsuccessful political campaign to

participate in the democratically elected parliament, the Communist Party of Nepal (Maoist) made a formal declaration of "People's War" on February 13, 1996, with the aim to unseat the current constitutional monarchy and install a democratic republic. They charged the government with poor administration, corruption, unfair taxation, and neglect of poor rural areas of the country.

The earlier stages of the insurrection were contained primarily in several mid-western districts, far from the capital and government stronghold (around Rolpa, Rukum, Jajarkot, Salyan, Pyuthan, and Kalikot) and aimed at damage to government installations and communication infrastructure, capturing weapons, and threatening government security forces. The government responded swiftly to these actions by declaring that the "People's War" was a political motivated 'terrorist activity'. In 1998 the government initiated an operation in these mid-western districts in an attempt to contain the growing movement. From mid-2000 however, the Maoists progressively expanded their campaign nationwide, spreading first widely into the mid and far western districts, and then across rural areas of most of the country. In December 2000 they declared the institution of the first "People's Government" in Rukum district, initiating a system of parallel government. In January 2001, the Nepali government responded by creating a special armed police force to fight the Maoists. This move helped the government to generally maintain control of district headquarters, major cities and large towns, while the Maoists controlled the majority of the rugged countryside of Nepal, where communication and transportation are difficult. By 2001, they were operating in 68 of Nepal's 75 administrative districts (South Asia Terrorism Portal 2006a). The elites of the capital began experiencing Maoist initiated violence in the form of a few bomb blasts in 2004. In March 2006 the Maoists launched a successful week-long blockade of Kathmandu. Finally in June 2006 serious peace talks commenced and on November 21, 2006 the government and the Maoists signed a comprehensive peace agreement declaring an end to the conflict.

As this conflict was staged mainly as a guerrilla war, there was generally no 'frontline'. It was largely unknown where fighting would break out, and civilians were often unintentionally caught up in firefights and bomb blasts. In addition, both Maoists and government forces intentionally used civilians for political purposes. Reported violent acts by the Maoists and Nepali government security forces against civilians include torture, extra-judicial killings (both discriminate and indiscriminate), bombings, gun fights, abductions, forced conscription, billeting, and taxing (South Asia Terrorism Portal 2006b; Hutt 2004; Pettigrew 2004). From 2000 until the end of 2006, the Maoists were responsible for a total of 4,312 deaths and the government forces were responsible for 7,544 deaths (Informal Sector Service Center 2006).

In addition to the violence, civilians were subjected to a number of political events during this time, including strikes and protests, changes of government, states of emergency, and several ceasefires. Three ceasefires were called in 2001, 2003, and 2006, and subsequently broken. A State of Emergency and martial law were instituted twice in 2001 and 2005. In 2002 when criticisms of the government's handling of the insurrection was mounting, the then King Gyanendra deposed the Prime Minister and took up executive powers. In early 2005 he dissolved the parliament and assumed direct rule. Political, civil society, human rights leaders, and journalists were arrested and communication was severely restricted. This period then is marked by negotiations between the Maoists and the key political parties as they unilaterally

declared a ceasefire and signed an agreement to work against the direct rule of the King. The capital Kathmandu and other major cities throughout the country experienced general strikes, protests, and curfews for the following six months until in April 2006 the King relinquished power and reinstated the parliament.

Throughout the conflict, the Chitwan Valley, from which the data for this study were collected, has remained one of the relatively less violent districts in Nepal, mainly because it is located far from the western regions of the country where the Maoist insurrection started and raged the strongest. Between 1996 and April 2006, Chitwan experienced 194 conflict related fatalities (Informal Sector Service Center 2006). This is slightly higher than the average number of fatalities of all districts, but much lower than the fatality toll in the most-affected western districts that experienced from 300 to 950 deaths throughout this same time period (Informal Sector Service Center 2006). Other violent disturbances in Chitwan have been infrequent. There were a few bomb blasts, the great majority in 2003 and 2004, the largest of which injured or killed 17 people. There was one major gun battle between the Maoists and security forces in June 2005 that resulted in 34 civilian fatalities. There were no abductions of large groups, but a few individuals were abducted in 2003 and 2004.

Along with these visible and countable disturbances, the people of Chitwan Valley have been subjected to taxes, billeting, conscription (by both Maoists and the government), curfews, and general strikes. Strikes were used as threats if the demands put forth by the conflicting parties were not fulfilled. Such strikes and protests ranged from one to five days, with a shutdown of transportation and other basic services, with life in general coming to a standstill. These closures severely affected people's access to public services (schools, health centers) and the labor market, especially for those who relied on daily wages. While most of such strikes were nationwide, some were location specific, limited to one or more districts. As in other parts of the country, strikes in Chitwan called by the Maoists and other political parties entailed the complete shutdown of all transportation, businesses and the market. As an important juncture for major highways, Chitwan has been affected more than surrounding hill districts by transportation strikes. Many of such three to five day strikes were followed by a change in government, exacerbating the situation of political unrest, violence and general instability.

The Chitwan Valley of Nepal
The data analysis for this study is based in the Chitwan Valley of south-central Nepal. The valley is flat, fertile, and dominated by agriculture. The administrative district of Chitwan borders India and is about 100 miles from Kathmandu. There is one large city, Narayanghat, which lies at an important juncture of the East-West highway, the major highway that links the eastern part of the country with the western part, as well as to the border with India in the south. The rest of Chitwan's population, like much of Nepal, lives in small, rural villages. Most villages are connected to other villages and larger roads by paths or dirt roads.

Migration in the Chitwan Valley
In the 1950's, the fertile Chitwan Valley was opened up to migrants from all parts of the country after large tracts of forests were cleared to accommodate the migrants and create new farmland. Since then there has also been a large amount of migration from the Chitwan Valley to other areas of Nepal, but also notably to nearby areas of India. Much of the migration is seasonal and

is viewed as a strategy to supplement regular farm and household incomes during low periods of the harvest and planting cycle (Kollmair et al. 2006; Thieme and Wyss 2005). For domestic migrants, agricultural work is common (HMG et al. 2004), as well as urban wage labor in factories, and informal sector jobs (Graner 2001).

International migration is also common. Most Nepalis who migrate to other countries go to India where they can work as seasonal laborers in the larger wage labor markets in rural and urban areas (Kollmair et al. 2006). Nepal and India share an open border, so there are no restrictions on Nepalis for cross-border travel to India, making this international migration no more difficult than migration to other areas of Nepal. The 2001 census estimated that 2.5-5.0% of Chitwan residents were living abroad in 2001 (HMG et al. 2002) and 77% of these international migrants were in India. Data from a nationally representative sample survey allow us to estimate that about as many Chitwan residents are internal migrants (HMG et al. 2004).

Figure 1 shows the rate of out-migration, including internal and international migration, from the Chitwan Valley each quarter. Out-migration steadily declines from a high of about 8% in the July-September 1997 quarter until about March 2000. After this time, the percent of the population that moved out of the area in each quarter continued to decline but at a much slower rate of about 2% per quarter. There are three visibly significant peaks in out-migration. Out-migration reaches about 3.85% in the July-September 2001 quarter, about two times higher than surrounding quarters. In April-June 2002, about 3.4% of the population moved and in April-June 2005, 2.6% of the population moved. Both of these peaks are also about two times higher than surrounding quarters.

DATA AND MEASURES
The analysis for this study covers a period of nine years from June 1997, three years before the outbreak of nation-wide violence, and continuing for six more years during the violence until January 2006. As such, this is an unusual opportunity to study migration patterns during armed conflict in comparison with migration patterns during a period of relative peace before the conflict.

Three separate kinds of data are used in this study - survey data about individuals and households, data about violent events involved with the conflict, and data about political instability. For measures of individual and household characteristics, we use the Chitwan Valley Family Study (CVFS), a large-scale multidisciplinary study of the western part of the Chitwan Valley of Nepal, designed to investigate the impact of macro-level socioeconomic changes on micro-level individual behavior (Axinn, Pearce, and Ghimire 1999; Axinn, Barber, and Ghimire 1997; Barber et al. 1997). For measures of violent events, we use the South Asia Terrorism Portal (SATP), an India-based NGO that compiles records of all violent events in Nepal and other South Asian countries. For measures of political events we compiled a dataset from information collected from major English and Nepali news media, from situation reports of non-governmental organizations in Nepal, and from the United Nations Nepal Information Platform (http://un.org.np).

The CVFS includes a variety of kinds of data, including an individual interview and life history calendar that were collected in the end of 1996, and a prospective demographic event

registry that is being collected monthly beginning in 1997. Overall, the CVFS includes 171 separate neighborhoods that were selected with an equal probability, systematic sample. All individuals between the ages of 15 and 59 and their spouses within these neighborhoods were included in the survey. At 97% of the original sample, the response rates are exceptional. Only 151 of the original 171 communities were included in the prospective demographic event registry. Therefore our sample includes those individuals who were resident in these 151 neighborhoods of the Chitwan Valley study area in 1996. Furthermore, our sample is restricted to those who were between the ages of 18 and 59 at the beginning of this study in June 1997. This age range excludes those who are likely too young or too old to be living independently or to make migration decisions for themselves. It also excludes the vast majority of young people who could still be enrolled in school, which previous research in this area has shown to be a strong and significant predictor of migration (Williams 2006).

Measures of Violent Events
The study uses four different measures of violent events — *major gun battles, bomb blasts, abductions* and the *period of war*. SATP provides records of the date and place of each major gun battle, bomb blast and abduction in Nepal. Data from Chitwan and six neighboring districts (Nawalparasi, Tanahu, Gorkha, Dhading, Makwanpur and Parsa) are used for this study based on the likelihood that residents of Chitwan would perceive violent events in their surrounding area as a threat to their own district as well.

The data for major gun battles covers 51 months, from November 2001 through January 2006. The data for bomb blasts covers 49 months, from January 2002 through January 2006. These data were used to create variables for the number of major gun battles and the number of major bomb blasts per month in the local area. For the time period that these data do not cover - from the beginning of June 1997 until November 2001 or January 2002 (for gun battles and bomb blasts respectively), the number of major gun battles and bomb blasts were imputed to be zero. This was based on news reports and research that indicates that the conflict was at a very low intensity around this time (Hutt 2004). Additionally the CVFS research staff who are resident in the area also indicate that there were very few of these violent events before 2002[1]. Thus this imputation strategy for the period before 2002 is likely a close representation of reality[2].

In this context gun battles represent a high level of violence or threat. On average, 31 people died in each major gun battle in Nepal (SATP 2006b). Major gun battles in this area were sporadic, an average of 0.17 per month, although each incident tended to last for a longer period of time than bomb blasts, up to several hours. In addition, reports indicate that nearby civilians were used as human shields and forced to clear dead and wounded bodies. Of the 51 months of records, there were gun battles in 12 months. The largest number of major gun battles in one month in this area was four, in April 2005. We present the descriptive statistics for this and all other variables in Table 1.

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[1] In 2002 there was exactly one bomb blast and one gun battle in the local area in Chitwan district.
[2] Models were also tested using variables created by imputing all the missing data with 1's, the mean of each variable for the 2002-2006 time period, and random numbers within one standard deviation of the mean. The results of these tests were very similar to the models that are presented here that use variables with missing data imputed with 0's.

[Table 1 about here]

In comparison, in this context bomb blasts represent a much lower level of violence. Bombs are small, often homemade devices that have much less destructive power than the bombs used in other current conflicts such as Iraq. During this conflict in Nepal, each bomb blast killed or injured an average of three people (SATP 2006b). Bomb blasts occurred more routinely with an average of almost one (0.97) bomb blast per month during the period of escalated violence. For example, from September 2003 there was at least one bomb blast in almost every month until August 2005. Of the 49 months of data about bomb blasts, there were 24 months in which there was at least one bomb blast. The largest number of bomb blasts in any one month was 12, in July 2004.

Abductions or forced conscriptions are defined as any event where one of the belligerent parties (the Maoists or government forces) forcibly removed an individual or group of individuals from their homes. Unlike in many other countries, abductions are not necessarily overtly violent to the individual who is abducted and in many cases do not involve ransom. In a large majority of cases, abductions during this time in Nepal involved forcibly removing large groups of people (even whole villages or one representative per household) to undertake physical labor, such as building roads or bridges or 'training' for war (by the Maoists). The abductions usually lasted for several weeks, after which the abductees were most often allowed to return to their homes. Thus, we find several single events where upwards of 1,000 people were abducted. Abductions are a good example of events related to the conflict that can disrupt economic and social life, and thereby affect migration behavior. In this context, there are some cases of abductions of people with opposing political affiliations, those suspected to be 'informants'; in some cases abduction of some journalists are known to have ended more violently. The number of abductions ranged from zero to 1,091 in a month. Due to this high range of a relatively less violent event, we code it as 10 abductions per month for the study period.

Finally, we use a measure that delineates the period of nationwide violence that affected the lives of civilians from the period before the outbreak of this violence. There is no official starting date for the violence of the Maoist insurrection. However, September 2000 approximately marks a "turning point" in the insurrection (Hutt 2004), when the Maoists escalated their violent campaign and began to expand nationwide and the government created the armed police force specifically to fight the Maoists. The number of fatalities from this time on changed the insurrection from a low-intensity, to a high-intensity conflict (Pettigrew 2004; Wallensteen and Sollenberg 2000). Thus a dichotomous variable *'During War'* is created that is coded as '1' for the period from September 2000 until the end of this study in January 2006. From 1997 through August 2000, when there was little generalized violence, this variable is coded '0'. In addition to *bomb blasts* and a*bductions*, this measure *'during war'* also represents a relatively low level of violence. As discussed earlier, compared to the rest of Nepal, Chitwan remained one of the less violent districts throughout the conflict. Furthermore, major incidents such as gun battles were relatively infrequent and smaller incidents such as bomb blasts were more common.

Measures of Political Events

This study examines three specific types of political events, namely, government instability, ceasefires, and strikes and protests. *'Government instability'* is defined as any major event that threatened the stability or basic functionality of the central government. This includes changes or depositions of the prime ministers or the ruling party, states of emergency, and the 2001 Narayanhiti Palace killings. This variable is coded dichotomously, with a '1' for any month when there was an event of government instability, and a '0' for any month without. The study period was marked by frequent changes in government– seven times within nine years – and all instances of such changes were related to the inability of the reigning government to bring any satisfactory resolution to the ongoing insurgency. Such frequent changes disrupted the administrative functioning of the government, as well as the situation of law and order, affecting livelihoods and the sense of security for most people throughout the country, but more so in rural areas. Twice during the study period, nation-wide states of emergency were imposed, once between November 2001 and August 2002, and the second time between February and April 2005. These periods were marked by suspension of rights such as freedom of movement and freedom of assembly, political and human rights leaders were arbitrarily detained and arrested, and communication links within the country and the outside world were severely curtailed.

'Strikes and protests' are any such event that involved at least several hundred people, took place nationwide, in Kathmandu and/or other urban areas, and were reported in national Nepali and English language newspapers. This is also coded as a dichotomous variable, with a value of '1' in any month with a major strike and protest, and a value of '0' in any month without either event. Nationwide strikes included in the data ranged from one day to five days and were called by the Maoists and legal political parties in Nepal at different points of time. Such strikes generally brought the country to a standstill, and caused fear and hardship for the general population at large. The protests were most often initiated by the legal political parties, lasted from a few days to about four weeks, and were sustained by widespread civilian participation and support. The day-to-day life of the general population was severely affected when and where these strikes and protests took place. Every year since the 1996 declaration of the *"People's War"*, the second week of February was marked as the anniversary of the declaration by the Maoists with strikes and mass rallies around the country. These week long events spread considerable unrest, insecurity and fear among people in all the conflict affected districts.

There were three specific interludes during the study period when both sides of the conflict agreed to a cessation of violence and to commence negotiations. The first of such official *'ceasefires'* occurred from July to November 2001, the second from January to August 2003, and the third from September 2005 till January 2006. As may be expected, the first several months of each ceasefire were characterized by peace. However, the last month of each ceasefire witnessed renewed and often relatively brutal fighting, which of course is precisely the reason that the ceasefires collapsed. This variable is also treated dichotomously; a value of '1' was given during the months of ceasefires over the three specific timeframes and a value of '0' in the months without any ceasefire. Refer to Appendix A for details of all these political events and Appendix B contains figures of violent events in Chitwan and its surrounding districts.

Migration
The measure of migration for this study comes from the CVFS prospective demographic event registry. This is a panel study where interviewers visited each household in the study sample on a monthly basis from 1996 through the present. Thus the CVFS registry has residence records for each individual in the sample on a monthly basis. For the purpose of this study 'migration' is defined as a one month or longer absence from an individual's original 1996 residence. This measure captures short- as well as long-term migration. This is especially important in the case of conflict, where research has shown that much of migration is temporary. Over the 104 month period of this study, 59% of the sample population migrated at least once.

Control Variables
In order to accurately estimate the effects of violence and political events on migration, a variety of individual- and household-level characteristics that could confound the relationship are included in the models. Many of these measures have been shown to affect regular migration patterns in this setting and in other countries. These measures include age, sex, ethnicity, marital status, children, past migration experience, education, work outside the home, land ownership of the individual respondents, as well as the months of the year (to control for seasonal migration patterns). These variables come from the CVFS Life History Calendars (Axinn et al. 1999), individual interviews, and the household consumption survey.

The use of a spline function to measure age allows the models to be sensitive to rates of migration that change non-linearly with age. Six age categories as follows are used: 15-20, 21-25, 26-30, 31-40, 41-50, and 51 years and older. Dichotomous variables are used for the sex of the respondent, to measure if an individual has ever migrated before 1996, was working outside the home in 1996, owned any land in 1996, or had any children in 1996. Similarly, a series of dichotomous variables are used to control for the five functional ethnic groups in this area: Upper-Caste Hindu, Lower-Caste Hindu, Newar, Hill Tibeto-Burmese, and Terai Tibeto-Burmese. Marital status is measured with four time-varying dichotomous variables including never married, married and living with spouse, married and not living with spouse (such as when a spouse is temporarily working elsewhere), and post married (divorced, separated, or widowed). Educational attainment which records the number of years of education an individual has completed by 1996, and the number of years they have lived in their 1996 neighborhood are measured as interval-level variables. Finally, in order to control for regular seasonal migration patterns in the Chitwan Valley, particularly in relation to the harvesting and planting cycles, a series of eleven dichotomous variables for each month of the year is used.

RESULTS
The results from the hazard models that test the effect of the conflict on migration provide evidence that out-migration from the Chitwan Valley *did* respond to specific events of violence and political instability during the period of the Maoist insurrection.

Violent Events and Migration
The results from the hazard models that test the effect of specific violent and political events on out-migration are presented in Table 2 and provide evidence confirming the association between each type of event and migration. The results are presented as odds ratios, so that a coefficient of

greater than one represents higher odds of out-migration, and a coefficient of less than one represents lower odds of out-migration.

[Table 2 about here]

The period of escalated violence between 2000 and 2006 – measured by the variable *"During War"* – significantly *decreased* the odds of out-migration during this period by about 50%. Hence, in contradiction to the threat based model, we see that compared to relatively peaceful times prior to 2000, the odds of people migrating out of the Chitwan Valley decreased as they possibly tried to avoid exposure to violence while travelling away from their community. In general we find that people adopt relatively precautionary behaviors and choose to migrate less during times of low levels of violence within their community as well as in surrounding areas.

Specific violent events during the period of conflict, such as gun battles and bomb blasts, that occurred in Chitwan and neighboring districts also had significant effects on out-migration. The results in Table 2 show that each major gun battle in a month *increased* the odds of out-migration in the following month by 15%. The largest number of gun battles in this area was four in the month of April 2005. In this case, because odds ratios are multiplicative, during the following month (May 2005) we would expect 1.57 or about 57% higher odds of out-migration from Chitwan. Bomb blasts on the other hand, *decreased* the odds of out-migration by about 5%, making people less likely to migrate in the month following a bomb blast. Five bomb blasts in a month would further decrease the odds rate of out-migration in the following month by about 23%. Abductions on the other hand do not have a significant effect on out-migration. The effect of increasing numbers of gun battles and bomb blasts on migration is shown in Figure 2.

[Figure 2 about here]

These results are consistent with the theory that specific violent events of armed conflict affect out-migration. The results support the threshold hypothesis that the decision to migrate is contingent upon the level of violence. Major gun battles are often visible, audible, and very threatening, affecting a wider group of people. The positive effects for this type of event may indicate that major gun battles quickly surpass an acceptable threshold of violence and thereby affect increased out-migration. Along the same hypothesis, bomb blasts in this context represent low intensity violence and such disruptions might actually lie below the threshold whereby people might decide to stay off the streets and migrate less. Thus these results support the hypothesis that there is a threshold effect of conflict on migration, based on the level of violence to which individuals are exposed.

Political Events and Migration
As presented in Table 2, political events in Chitwan and neighboring districts also had significant effects on out-migration. There was increased out-migration in months in which people experienced government instability and strikes and protests. When there was a change in government or an announcement of a state of emergency (measured by the variable '*Political instability*') the odds of out-migration *increased* by 1.29 or 29% in the *following* month. These results are consistent with our theory that periodic events of political instability can decrease the

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sense of security and wellbeing which in turn influences decisions to migrate. Ceasefires on the other hand, did not have any effect on outmigration. These results are shown graphically in Figure 3.

[Figure 3 about here.]

The effect of strikes and protests on outmigration was significant during the *same* month when such strikes occurred. During such months the odds of out-migration *increased* by 1.28 or about 28%. As discussed earlier, the significant effect in out-migration during the *same* month in which there were strikes and protests likely reflect two scenarios. This could reflect the out-migration (temporarily) of individuals who 'participated' (willingly or under duress) in the strikes and protests in Kathmandu and/or other major cities in Nepal; in other words this reflects migration *towards* the event. In addition, for people who sought to avoid the repercussions, this could also reflect migration *away* from the event. As discussed earlier, information about strikes and protests was flashed through the media (local FM radios and newspapers), thus in both of the above cases, people had information about the event *prior* to its occurrence. This would account for their migration prior to the political event itself.

Moderating Effects of Gender on Migration During Conflict Situations
We also conduct tests to see if different individuals experience and respond to violent and political events in different ways. We run separate models for the effects of violent and political events on out-migration for women only (Model 2) and for men only (Model 3). We present the results in Table 3, where we find some gender differences along the lines of our theory.

[Table 3 about here.]

The overall effect of the war (measured by the variable *"During War"*) has stronger negative effects on migration for men than for women. During the overall period of the conflict, the odds of out-migration for women *decreases* by about 43% but for men it *decreases* by about 54% showing a stronger negative effect for men. During violent events men are at greater risk than women in terms of being drawn into the war in ways that we mention earlier. Hence they seem to adopt the more precautionary behavior of seeking the safety of being home and within the community rather than migrating. In addition, we created a series of models with an interaction term between gender and each of the violent and political events. We do not show the results of these models here, but the differences between the odds of out-migration during the overall period of conflict (*During War*) for men and women are statistically significant.

Yet, when we look at specific violent events we find that, in particular, major gun battles *increases* the odds of out-migration for men by 1.18 or about 18%. As discussed earlier, men are more likely to be drawn into the conflict during gun battles which also represent higher levels of violence and thus higher levels of fear and under such circumstances the odds of their migrating *increases*. In comparison to men, gun battles also have a slightly positive effect on out-migration for women, but it is not a strong or significant effect. Though, in this context, gun battles represent higher levels of violence the risks are greater for men compared to women which potentially influences differential migration decisions.

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In the case of bomb blasts, we find a significant negative effect (about 5%) on out-migration for women. The effects are small for men too but they are not significant. These results support the hypothesis that men and women will not have different migration responses to violent events because the differences in how they process fear of victimization counteract the different level of actual risk they are exposed to by violent events.

Political instability has different effects on women and men compared to violent events. Events of political instability represent almost equal risks to both men and women, but in the case of women the odds of out-migration in the month following an event of political instability *increases* by about 40% compared to men which is much lower at about only 16% but not significant. This difference is also statistically significant in our interaction model between gender and political instability (results not shown) and is once again a potential indicator of the differentials in processing of fear of victimization by women compared to men, making them more likely to migrate under these circumstances.

The effect of strikes and protests also depict similar results. While such events affect both women and men and *increase* the odds of out-migration for both (by about 31% and 26% respectively), the effects are slightly larger for women. Strikes and protests have debilitating effects on the livelihoods of men and women, albeit they are usually short term in nature. As mentioned earlier, there are possibilities of migrating *towards* such political events depending on the voluntary or coerced political participation of the individuals. Migrating *away* from the event could signal alternative coping strategies for both women and men in relation to their fear of victimization as well as for the sake of their livelihoods, and we find that this effect is stronger for women.

CONCLUSION
As a case study, the recent Maoist insurrection in Nepal provides us with a unique opportunity to empirically investigate how specific events during periods of conflict affect individuals' decisions to migrate or not to migrate. In this study, we find evidence that different events and aspects of conflict influence the decision to migrate. In addition, we also find evidence that women and men react differently under the circumstances of conflict, based on differences in their experiences of actual risk and their cognitive processing of fear.

The results from the hazard models that test the effect of the conflict on migration show that out-migration from the Chitwan Valley did respond to specific events of violence and political instability during the period of the Maoist insurrection. We find that at the individual level, people are influenced by levels of violence and there is likely a threshold, or a certain level of violence that they are willing and able to accept. This leads to differences in their decision to migrate or not to migrate. Violent events that impose high levels of threat (such as gun battles in this context) increase the odds of out-migration, while low levels of violence (such as bomb blasts) decrease the odds. Political instability and strikes and protests also increase the odds of out-migration. Yet the overall effect of this low intensity conflict in the Chitwan Valley decreased the odds of out-migration, indicating that individuals likely prefer the relative safety of their homes and communities to that of migrating.

Although the dominant threat-based decision model of forced migration studies would suggest a linear increase in the out-migration of individuals during times of conflict, our results show that the situation is more complex. Our multi-dimensional, event-centered model of individual experiences and migration behavior enhances our understanding of the multiple factors that affect an individual's decision to stay in their community or to migrate away. This lends considerable depth to our understanding of how micro-level behavior such as migration is influenced by macro-level context. Understanding these relationships can also improve our ability to predict mass movements of people following specific events. This can contribute to better preparation on the part of communities, local governments, and policy makers to accommodate such large-scale migrations.

This study focuses on physical threat and fear as the mechanisms through which conflict motivates people to migrate or not. We also consider some of the effects of conflict on social and economic life. Evidence that different types of events affect migration differently, and that this relationship is moderated by gender highlights a need for further study of individual variability in migration responses to conflict. Detailed study of the social, economic, and psychological consequences of conflict and how community and individual characteristics affect the experience of these consequences would contribute to our theoretical and practical understanding of migration during conflict.

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TABLES AND FIGURES

Table 1. Descriptive Statistics of measured used in the analysis of political conflict and its relationship to migration, Nepal.

Variables	Mean/Median	Standard Deviations
Violent Events		
During War (0,1)	0.63	0.49
Gun Battles (range = 0-4)	0.17 / 0	0.60
Bomb Blasts (range = 0-12)	0.97 / 0	2.18
Abductions (range = 0-1091)	14.9	10.91
Political Events		
Political Instability (0,1)	0.19	0.40
Ceasefires (0,1)	0.17	0.37
Strikes and Protests (0,1)	0.14	0.35
Control Variables		
Migrated during study period	0.59	0.49
Gender (Female)	0.54	0.50
Age (in 1997)		
18-20 years old	0.09	0.28
21-25 years old	0.16	0.36
26-30 years old	0.16	0.36
31-40 years old	0.26	0.44
41-50 years old	0.20	0.40
51 + years old	0.14	0.35
Marital Status		
Never married	0.08	0.27
Married, living with spouse	0.54	0.50
Married, not living with spouse	0.31	0.46
Divorced, Separated, Widowed		0.24
Other Experiences	0.06	
Have any children (in 1996)	0.81	0.39
Educational Attainment (in 1996)		4.44
(Range =0-16)	3.86	
Working wage or salary job (in 1996)	0.44	0.50
Own any land (in 1996)	0.92	0.27
Ever migrated (before 1996)	0.25	0.43
Caste/Ethnicity		
Upper Caste Hindu	0.46	0.50
Lower Caste Hindu	0.10	0.30
Hill Tibeto-Burmese	0.15	0.36
Terai Tibeto-Burmese	0.21	0.41
Newar	0.06	0.24

Table 2. Violent and Political Events: Logistic Regression Estimates of Discrete-Time Hazard Models of Out-Migration from Chitwan Valley, Nepal.

Measures	Odds Ratio	Z-Statistic
Violent Events		
During War (0,1)	0.50***	(9.23)
Major Gun Battles (# per month)	1.12 *	(2.07)
Bomb Blasts (# per month)	0.95 *	(2.05)
Abductions (#/10 per month)	1.00	(0.73)
Political Events		
Political Instability (0,1)	1.29 **	(3.02)
Ceasefires (0,1)	1.02	(0.18)
Strikes and Protests (0,1)	1.28 *	(2.16)
Control Variables		
Gender (Female)	0.83 **	(3.08)
Age 18-20 years old	0.84	(1.21)
21-25 years old	0.90 ***	(3.88)
26-30 years old	0.93 ***	(3.20)
31-40 years old	0.94 ***	(5.30)
41-50 years old	1.02 *	(1.75)
51 + years old	1.00	(0.04)
Marital Status		
Never married	0.80 **	(2.33)
Married, living with spouse	*Reference*	
Married, not living with spouse	1.35 ***	(4.13)
Divorced, separated, or widowed	1.48 ***	(3.43)
Other Experiences		
Have any children (in 1996)	0.61 ***	(6.08)
Educational Attainment (in 1996)	1.04 ***	(6.03)
Working wage or salary job (in 1996)	1.06	(1.19)
Own any land (in 1996)	0.53 ***	(8.11)
Ever migrated (by 1996)	1.72 ***	(9.71)
Caste/Ethnicity		
Upper Caste Hindu	*Reference*	
Lower Caste Hindu	0.99	(0.09)
Hill Tibeto-Burmese	1.25 ***	(3.31)
Terai Tibeto-Burmese	0.77 ***	(3.75)
Newar	0.79 *	(2.26)
Months of the year		
January	*Reference*	
February	0.82 ^	(1.54)
March	1.06	(0.46)
April	0.84 ^	(1.31)
May	1.09	(0.69)
June	1.07	(0.56)
July	0.97	(0.26)
August	1.22 *	(1.81)
September	1.23 *	(1.86)
October	0.78 *	(1.92)
November	1.09	(0.74)
December	0.93	(0.57)
No. of person-months	181,398	
-2 log likelihood	19,198	
Number of people	3,114	
Note: Estimates are presented as odds ratios. Z-statistics are given in parentheses. *p<.05 **p<.01 ***p<.001		

Table 3. Gender Differences in Response to Violent and Political Events
Logistic Regression Estimates of Discrete-Time Hazard Models of Out-Migration from Chitwan Valley, Nepal.

Measure	Females	Males
	(Model 2)	**(Model 3)**
Violent Events		
Major Gun Battles	1.05	1.18 *
(# per month)	(0.63)	(2.09)
Bomb Blasts	0.95 *	0.97
(# per month)	(1.76)	(1.03)
Abductions	0.99	1.00
(#/10 per month)	(0.93)	(0.06)
During War	0.57 ***	0.46 ***
(0,1)	(5.43)	(6.97)
Political Events		
Political Instability	1.40 **	1.16
(0,1)	(3.00)	(1.14)
Ceasefires	1.02	0.98
(0,1)	(0.16)	(0.13)
Strikes and Protests	1.31 *	1.26 ^
(0,1)	(1.77)	(1.33)
----------CONTROL VARIABLES NOT SHOWN--------		
-2 Log Likelihood	9932	9098
No. of person-months	108,501	72,897
No. of people	1,688	1,426

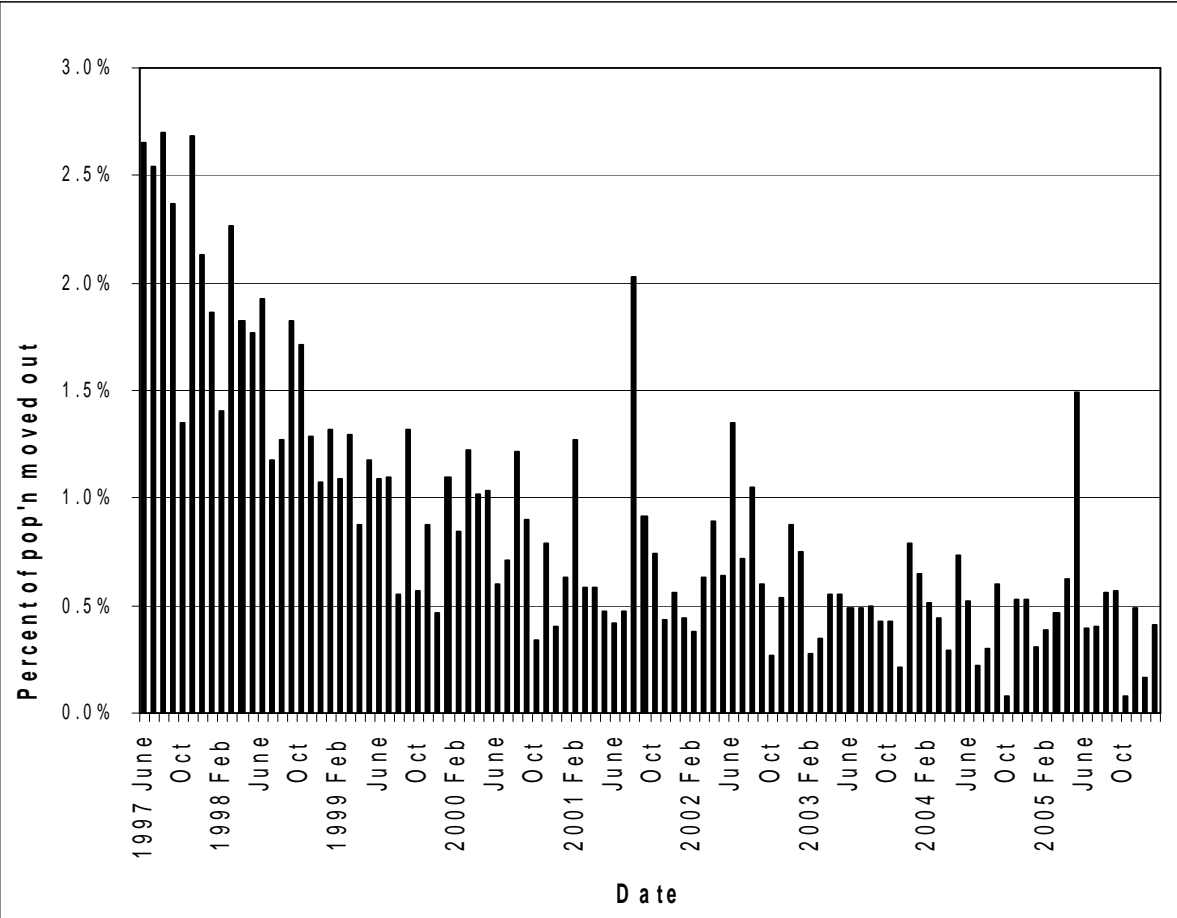**Figure 1.** Monthly out-migration rates, 1997-2006 Chitwan Valley, Nepal.

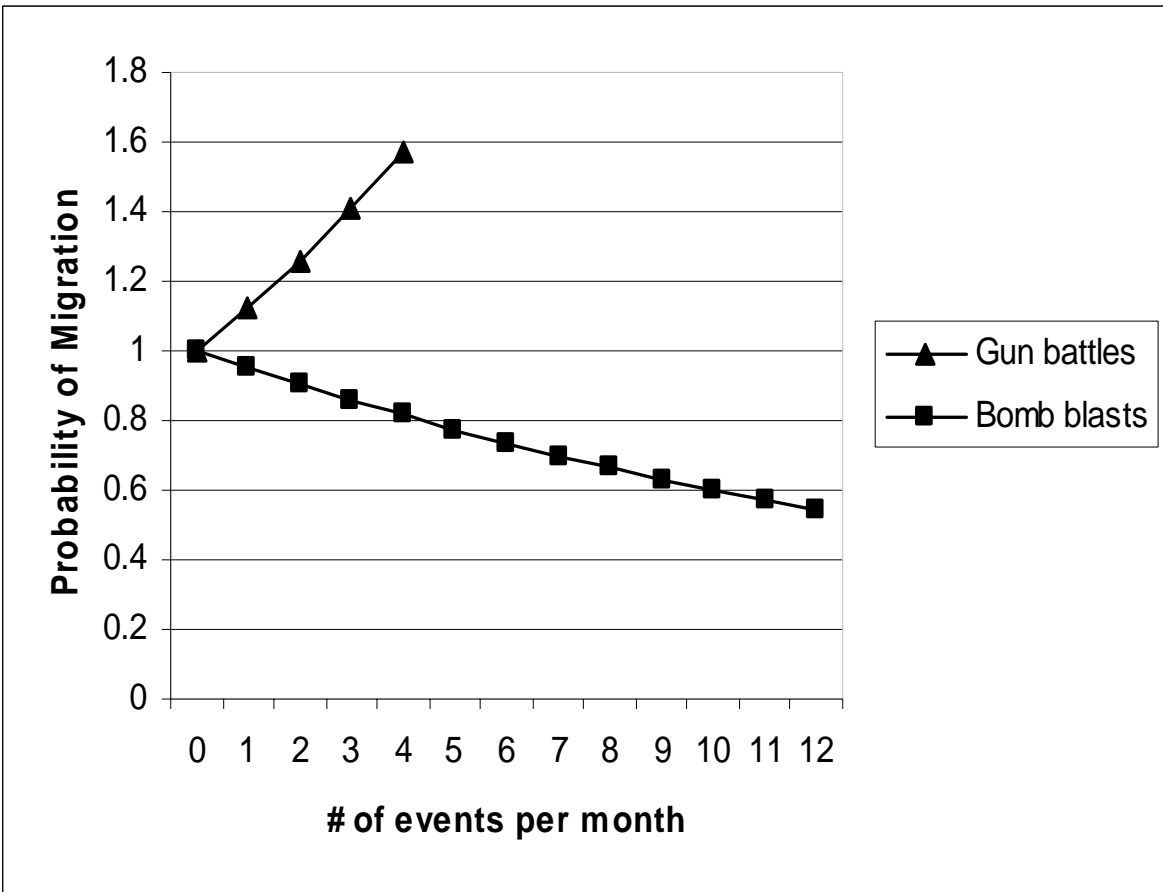**Figure 2.** Predicted probability of migration after violent events

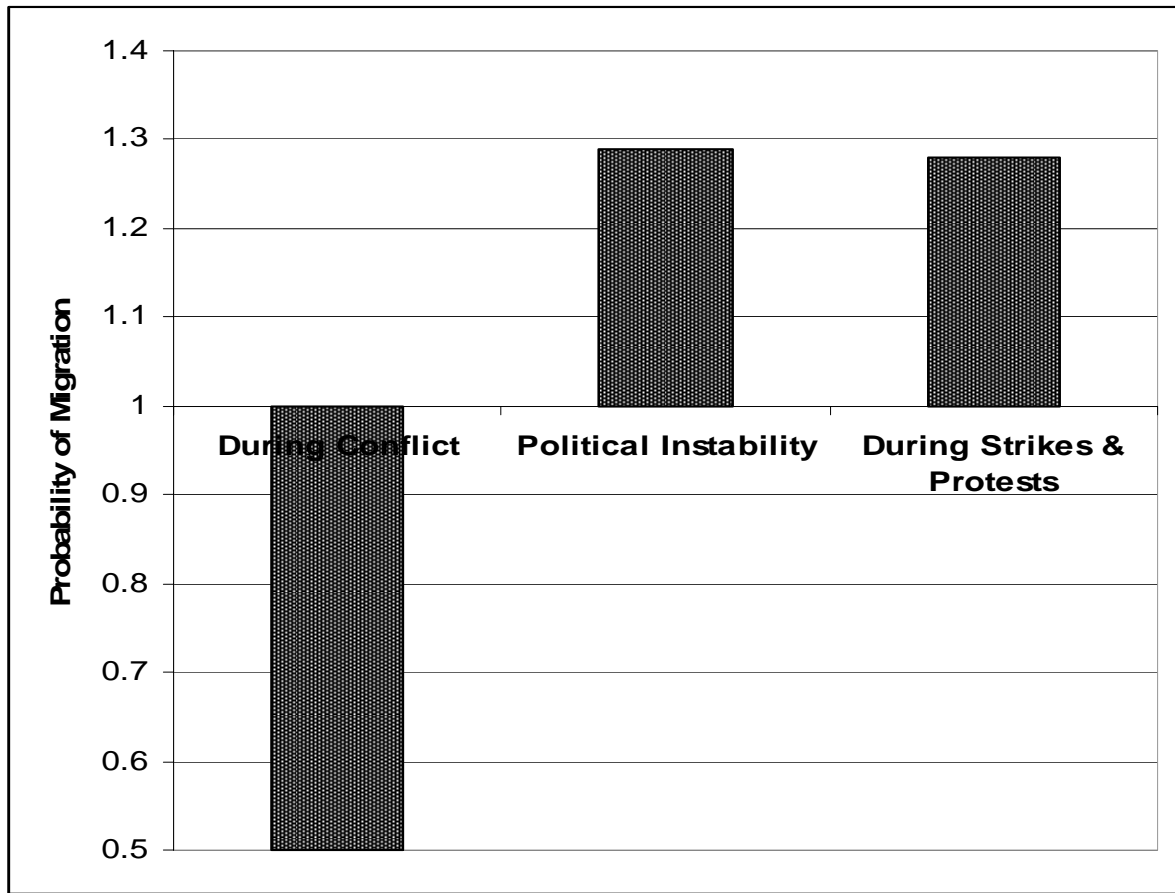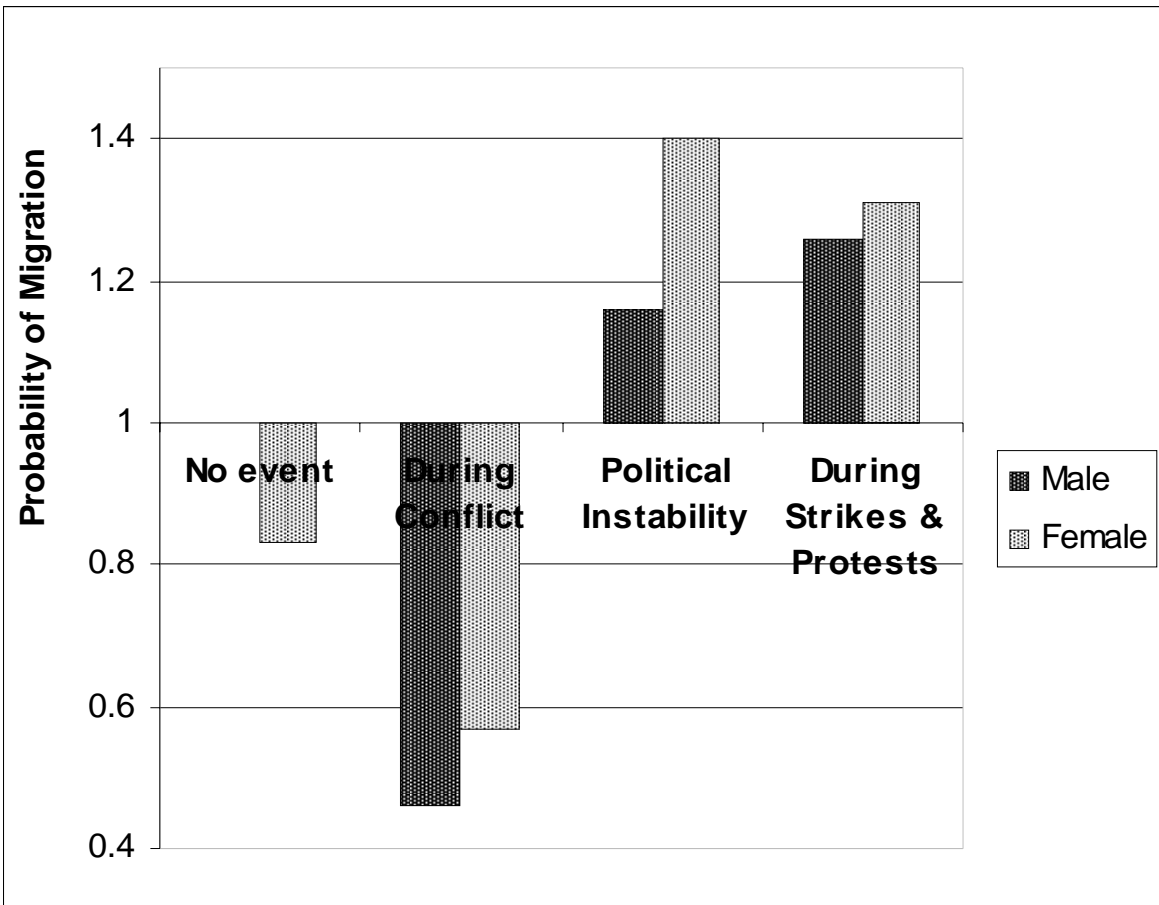**Figure 3.** Predicted probability of migration after political events, Chitwan Valley, Nepal.

Figure 4. Predicted Probability of Migration after Political Events - Gender Differences – Chitwan Valley, Nepal.

Appendix A.
Major Political Events during the Maoist Insurrection, Nepal.

POLITICAL EVENTS IN NEPAL			
Date	**Events**	**Study Months**	**Notes**
Ceasefires			
July – November 2001		54-58	First ceasefire
January - August 2003		72-79	Second ceasefire
Sept. 2005 - January 2006		104-108	Third ceasefire
State of Emergency			
Nov. 2001 - August 2002		58-67	
February - April 2005		97-99	
Government Instability			
March 2000	Change in Prime Minister (PM)	38	
June 2001	Palace Killings	53	
July 2001	Change in PM	54	11th Government since 1990; *Holeri* incident (Maoists killed)
May 2002	PM dissolves parliament	64	
October 2002	King deposes PM - Change in PM	69	King takes up Executive powers
May 2003	Change in PM	76	
June 2004	Change in PM	89	
August 2004	Maoists blockade Kathmandu for 1 week	91	
February 2005	King takes over power	97	King assumes absolute power – direct rule
June 2005	Change in PM	101	
Major Strikes and Protests			
February (every year since 2001)	Annual Maoist anniversary of "People's War"	49,61,73,85,97	Week long protests
April 2001	General nationwide strike	51	Markets and transportation
April 2002	5-day nationwide strike, called by Maoists	63	
April 2003	Call for 3 day national strike	75	Call for joint movement by Maoists
August 2003	Maoists calls day long strike	79	*Dorambha* incident
September 2003	3 day general strike,	80	
May 2004	Street protests called by political parties	88	Restoration of Parliament, people's representatives
June 2004	Street protests continue	89	
April - May 2005	Protests, strikes	99-100	May: failure of peace talks with Maoists
September 2005	Daily protests	104	Restoration of Democracy

Appendix B.
Violent Events During the Maoist Insurrection, Nepal.

Figure B1. Number of Major Gun Battles per month in Chitwan and Neighboring Districts
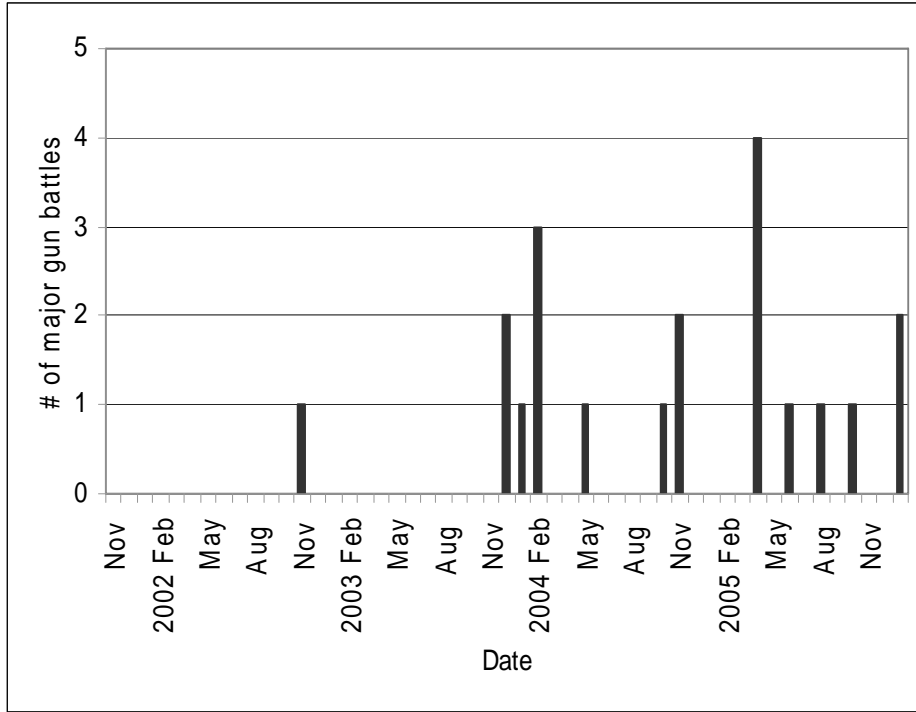

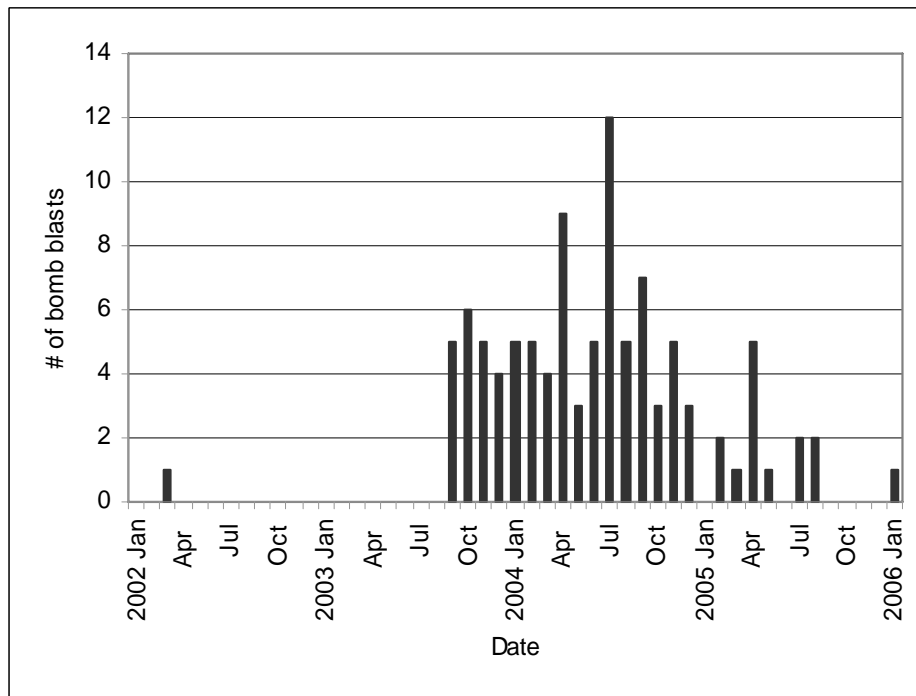**Figure B2.** Number of Bomb Blasts per month in Chitwan and Neighboring Districts

Figure B3. Number of Abductions/Forced Conscriptions per month in Chitwan and
Neighboring Districts