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Abstract

Beginning in the 1990s, a trend of using the security dilemma to explain ethnic violence has emerged. However, previous research mainly focuses on individual cases with large-scale violence; whether ethnic security dilemma theory is a sound approach to explain less violent ethnic conflict remains unclear. This paper employs a large-N design and tests the hypothesis that the ethnic security dilemma causes ethnic conflicts, without discriminating between differences in severity and scale of conflict. The paper also conducts a longitudinal comparison with a previous quantitative model using the latest data available. The empirical results do not support the hypothesis and suggest that the explanatory power of the ethnic security dilemma has declined over time. Although there is no definite conclusion that the ethnic security dilemma is not a useful explanation for less violent ethnic conflicts, given the limitations of this research, I conclude with a theoretical discussion questioning the applicability of the theory. Supplemented with this qualitative assessment, I conclude that a quantitative study of the ethnic security dilemma used to explain ethnic violence may not be a viable option for future research in this field.

**THE ETHNIC SECURITY DILEMMA AND ETHNIC VIOLENCE:
AN ALTERNATIVE EMPIRICAL MODEL AND ITS EXPLANATORY POWER**

Jiaxing Xu

***Abstract:** Beginning in the 1990s, a trend of using the security dilemma to explain ethnic violence has emerged. However, previous research mainly focuses on individual cases with large-scale violence; whether ethnic security dilemma theory is a sound approach to explain less violent ethnic conflict remains unclear. This paper employs a large-N design and tests the hypothesis that the ethnic security dilemma causes ethnic conflicts, without discriminating between differences in severity and scale of conflict. The paper also conducts a longitudinal comparison with a previous quantitative model using the latest data available. The empirical results do not support the hypothesis and suggest that the explanatory power of the ethnic security dilemma has declined over time. Although there is no definite conclusion that the ethnic security dilemma is not a useful explanation for less violent ethnic conflicts, given the limitations of this research, I conclude with a theoretical discussion questioning the applicability of the theory. Supplemented with this qualitative assessment, I conclude that a quantitative study of the ethnic security dilemma used to explain ethnic violence may not be a viable option for future research in this field.*

INTRODUCTION

The growing interest in the study of ethnic violence is partly the result of the sweeping wave of bloody violence occurring after the Cold War, which left weakened Weberian states extremely susceptible to a variety of violence, including ethnic violence.¹ The study of ethnic conflicts is a relatively new subfield within social science. Ethnic conflicts closely associate with studies of ethnicity and nationalism on the one hand, and studies of political violence on the other.² Efforts have been made to foster disciplinary debates between those non-intersecting literatures in the past decades, and, as a result, the domain of the study and key research questions are more clearly formulated, with a central focus on the causes of ethnic violence.

Scholars have given various explanations, ranging from instrumentalists' view of relative deprivation to constructivists' view of threatened identity. A trend of using the international relations concept of the security dilemma to explain ethnic violence emerged in the 1990s. Various case studies affirm that this causal mechanism provides an explanation for

¹ Desjarlais and Kleinman 1994.

² Brubaker and Laitin 1998.

large-scale ethnic violence in particular countries, but only a few studies have attempted to quantify this concept and empirically measure the explanatory power of this framework. Thus, several critical questions remain unanswered or answered unsatisfactorily:

Is the ethnic security dilemma a coherent explanation of some lesser violent ethnic conflicts? Is the ethnic security dilemma suitable for a mass application, or only to specific cases? How should one approach a quantitative study aiming to operationalize this rather complex concept? Has the explanatory power of ethnic security dilemma changed over time?

These questions are important because it must be determined whether the ethnic security dilemma yields any fruitful results in a large-N study; the answer of which will direct future research efforts. Only if such a study provides a promising outlook will a broader application of this theoretical framework be justified. Otherwise, the use of the ethnic security dilemma theory will be restricted to specific conflict dyads on a case-by-case analysis.

This research paper will attempt to address these problems and fill in the gap existing in the current literature. Therefore, the central question of this research is: does the security dilemma cause ethnic violence in a statistically significant way, regardless of the case's scale and severity? If so, to what extent does the effect the security dilemma explain the occurrence and intensity of recent ethnic violence? If not, what are some problems with the theory in its broader application, and is there any inherent limitation of this theory?

LITERATURE REVIEW

Ethnicity, Ethnic groups, and Ethnic Conflict

Ethnicity lacks a universally acknowledged definition, but I chose to base my paper on Horowitz's brief discussion of ethnicity and ethnic groups because of its well-balanced nature and Horowitz's recognized intellectual authority in the field.

He first quotes Enid Schidkroun's formulation: "the minimal definition of an ethnic unit [...] is the idea of common provenance, recruitment primarily through kinship, and a notion of distinctiveness whether or not this consists of a unique inventory of cultural traits."³ The core definition of ethnicity, according to Horowitz, "embraces groups differentiated by color,

³ Horowitz 1986, 53.

language, and religion; it covers 'tribes,' 'races,' 'nationalities,' and castes"⁴ and the membership is typically not chosen but given."⁵ Conflict is yet another fuzzy concept. This paper does not attempt to clearly distinguish between conflict and violence, but rather to treat ethnic violence as a violent and more severe variation of conflict. Simply put, "conflict is a struggle in which the aim is to gain objectives and simultaneously to neutralize, injure, or eliminate rivals."⁶

The combination of "ethnic" and conflict creates another interesting definitional problem. Ethnicity may be at work in certain cases of violence, but they can hardly be said to be ethnic conflicts if other factors primarily account for their occurrences. As Brubaker and Laitin argue, how "ethnic" modifies "conflicts" or "violence" remains unclear and largely unexamined.⁷ But several defining characteristics of ethnic conflicts can be summarized as follows. First, ethnic conflicts are inter-communal, meaning two groups in a given conflict are strictly identified by their kinship and ethnic identities. Second, two parties cannot both be states or representatives of states.⁸ Third, motives of the conflicts are usually ethnically related and common goals include to gain more political autonomy or to establish a separate state.

Theories of Ethnic Conflicts

Three general theoretical approaches that almost encompass all research of ethnic conflicts are primordial, instrumental, and constructive. The primordial approach views ethnic conflicts as unavoidable, because the problems root in the inherent differences between ethnic groups. In other words, ethnic identity itself is the determinant of ethnic conflicts. In contrast, the instrumentalist approach "understands ethnicity as a tool used by individuals, groups, or elites to obtain some larger, typically material end."⁹ Constructivists, on the other hand, see ethnic identity as a social construction and thus each conflict has its special social origin.

Ethnic conflicts, in many respects, resemble political violence that takes place at the interstate level. It is a natural progression for scholars to go beyond the realm of ethnic relations and political violence and to ponder the possibilities of taking an interdisciplinary approach to examine the cause of ethnic conflict.

⁴ Ibid.

⁵ Horowitz 1986, 56.

⁶ Horowitz 1986, 95.

⁷ Brubaker and Laitin 1998.

⁸ Ibid.

⁹ Lake and Rothchild 1998, 5.

Security Dilemma as an International Relations Theory Concept

“The greatest war in history could be produced without the intervention of any great criminals who might be out to do deliberate harm to the world but with two actors each desperately anxious to avoid conflict of any sort.”¹⁰

The security dilemma concept was first used by John Herz in 1951.¹¹ The tragedy of security dilemma becomes possible due to the anarchic nature of the international system and inherent uncertainty and fear of states for their own security. Some important developments in political psychology, especially Robert Jervis’ *Perception and Misperception in International Politics*, open the door for a new way of thinking about international conflicts. The argument that intentions of one party may be misperceived is a critical premise of the security dilemma. Several other scholars outline the central theoretical framework of security dilemma as follows: States are rational actors and self-help is the only way to guarantee the survival of the states in an anarchic international society. Decision makers have to constantly perceive others’ intentions but benign intentions of one party’s action (defensive, or merely aiming at increasing one’s own security) can be misperceived as malign (offensive). Thus this misperception triggers a counteraction which is not necessarily offensive but may be misperceived as well. Thus confrontation escalates and securities of both actors decline. “The unique analytic core of the security dilemma lies in situations in which one or more disputing parties have incentives to resort to preemptive uses of force.”¹²

The Ethnic Security Dilemma: an Alternative Use

Recent studies have proven that the conceptual frame of the security dilemma is useful when thinking about ethnic conflicts at the intrastate level, although its relevance may be difficult to see at first sight. The application of the security dilemma was first popularized by Barry Posen¹³. Posen articulates some interesting parallels between an international system and ethnic relations within a state from a realist’s perspective. First, the collapse of imperial regimes produces the problem of “emerging anarchy.” Second, ethnic groups behave as if they are states without the assurance of their security by the state and thus “the security dilemma affects the

¹⁰ Butterfield 1952, 21.

¹¹ Roe 1999.

¹² Lake and Rothchild 1998; Leuprecht 2010; Roe 2002.

¹³ Roe 1999.

relations among these groups, just as it affects relations among states.” Third, “the indistinguishability of offence and defense” favors the worst-case analysis and preemptive action.¹⁴ All these conditions will similarly generate a spiral of action and reaction that is typically found in an international conflict. The most popular examples of the security dilemma include the former Yugoslavia¹⁵, Moldova’s civil war¹⁶, and Croatia.¹⁷

Later development of this paradigm concerns what constitutes the security of an ethnic group. Societal security, a dimension of state security that by itself can be a referent object¹⁸, is viewed as very important for ethnic minorities. Societal security broadly captures traits relating to the preservation of group identity, including language, customs, and religious practices. Waver gives a formal definition of societal security:

“The ability of a society to persist in its essential character under changing conditions and possible or actual threats. More specifically, it is about the sustainability, within acceptable conditions for evolution, of traditional patterns of language, culture, association, and religious and national identity and custom.”¹⁹

Survival of an ethnic group in this sense is less dependent on the economic power or military strength, but on a sense of group cohesion and a guarantee of continual practice or expression of its tradition. In addition, the ethnic security dilemma is “closer to a ‘perceptual security dilemma’ rather than a ‘structural security dilemma.’”²⁰ So actual conditions of the security dilemma do not matter as much as whether the ethnic groups perceive such conditions.

The literature on security dilemma theory is largely comprised of qualitative analyses, with a vast majority focusing on single or comparative case studies. Several prominent uses of the concept include Kaufman’s *Spiraling to Ethnic War* (1996), in which he analyses Moldova’s path to civil war. In this article, Kaufman reasoned that one condition of the ethnic security dilemma is de facto anarchy. Paul Roe elaborates on the security dilemma by tracking the roots

¹⁴ Posen 1991, 27-33.

¹⁵ Dulic and Kostic 2010; Posen 1991.

¹⁶ Kaufman 1996.

¹⁷ Roe 2004.

¹⁸ Roe 1999.

¹⁹ Waver 1993; Roe 1999.

²⁰ Kaufman 1996, 112.

of several concepts involved and uses them to analyze the Hungarian-Romanian struggle---“the Transylvania’s societal security dilemma.”²¹ One should notice that the security dilemma theory is mostly used to explain large-scale ethnic conflicts that ultimately result in civil wars or ethnic cleansings. Subsequent development of this strand of literature produces many variations. Some scholars use the theory in a much limited sense, only explaining a single aspect of a case. One example of this variation is the demographic security dilemma. The author shows that how an economic project causes security dilemma between Hans and minorities in west borders.²² Although those researchers use the core causal explanation provided by security dilemma, these less rigid uses of the concept make their true applicability and its explanatory power questionable.

Few attempts have been made to operationalize the security dilemma into a quantitative analysis, or at least provide some statistical guidance on how powerful the paradigm is in explaining ethnic violence. Unlike other approaches in which causes often have identifiable indicators suitable for both qualitative accounts and statistical manipulations, the security dilemma involves a causal chain and some not easily quantifiable concepts.

But in his book *Anarchy Within*, Erik Melander makes a breakthrough. He painstakingly constructs a game theory model to capture the dynamics of the ethnic security dilemma. Melander’s first step enables him to identify the dependent variable, “restraint breakdown”, which is defined as the “preemptive resort to large-scale ethnic warfare.” He then derives three empirical indicators, namely, status quo utility, fear, and first strike advantages, from his previous game theory analysis. He further operationalized them into measurable independent variables as separatist grievance, democracy, and ethnoterritorial dominance respectively. It is expected that lower status quo utility, more fear, and high first strike advantage will lead to a severe security dilemma and thus cause ethnic violence manifested in the form of warfare or mass guerilla activity. His results provide “strong support for the notion that the Security Dilemma is a sound causal mechanism of high relevance for explaining the outbreak of large-scale ethnic warfare and cleansing in a context of political transition.”²³

²¹ Roe 2002, 67.

²² Clarke 2007.

²³ Melander 1999, 109.

This is a sound and logically coherent application of the security dilemma concept. But several limitations are obvious. First, the scope of the study is limited. The ethnic security dilemma may only provide explanations to severe ethnic conflicts. By setting a high threshold in coding only cases with severe outbreaks of violence, Melander loses the opportunity to investigate whether or not the theory can provide meaningful insight into ethnic violence in a full spectrum. Second, as Melander himself admits, the indicators are somewhat crude. All variables are dummy variables, while available data allows more accurate representation of the concepts.

I will try to develop an alternative quantitative model, using Minorities at Risk (MaR)²⁴ dataset, to test the soundness of security dilemma as a causal explanation of ethnic violence.

RESEARCH DESIGN

Does the security dilemma cause ethnic violence in a statistically significant way, given all cases available? And if so, to what extent does the security dilemma affect the occurrence and intensity of ethnic violence? If not, what are the implications of the results? My hypothesis is straightforward: the more severe the security dilemma, the more severe the ethnic violence. This hypothesis has been used or implied in many studies, but what differentiates this research is the methodology.

Turning this hypothesis into a working one remains daunting because the ethnic security dilemma, like many other complex theoretical concepts, lacks direct quantifiable potential. Some scholars take an indirect approach to test this hypothesis in their studies, one of which is to deliberately introduce intervening variables that are the logical consequences of the ethnic security dilemma, and test the relationship between the intervening variables and the dependent variables. This is problematic because intervening variables by themselves may explain the ethnic violence without any reference to the security dilemma theory-an indirect causation problem. Many more have chosen to give anecdotal accounts in their case studies to make a qualitative assessment of the hypothesis. Another approach is to test variables that are strongly indicative of, or that will cause an ethnic security dilemma. Melander takes a similar path in his study.

²⁴ Minorities at Risk Project 2009.

I will try to justify my selection of several variables that constitute the ethnic security dilemma and develop a testable model in a large-N design.

Components of the Security Dilemma

ANARCHY: In his work, Posen recognized that “emerging anarchy” is a precondition of ethnic security dilemma.²⁵ Anarchy, in an intrastate context, may not only refer to a lack of central authority, but also to a lack of public services and various social programs that produces a perception of a quasi-anarchic environment. It will lead to a security dilemma because when groups perceive their governments as being unable to take action to protect their identities and address their cultural concerns, they will increasingly rely on self-help. Lack of rule enforcement provides motivation to resort to violence rather than an incapable superior authority.

FEAR. Fear is an essential dimension of the security dilemma because any uncertainty of the future will make members of ethnic groups feel vulnerable, and thus an action of the opposed party will be more likely to trigger violent reactions. Different kinds of fear will contribute to the ethnic security dilemma mechanism. I categorize fear into three variations: 1) fear of loss of group identity; 2) fear of repression of ethnic tradition; 3) fear of physical survival (ethnic cleansings) or prosperity of the community. Notice that the source of the fear does not need to be specified, meaning that fear imposed on an ethnic group, regardless of whether it comes from another group that is directly in conflict with or not, will have similar effects because reaction is not necessarily targeted to the source of the fear. In other words, when A group (or government) makes B group feel vulnerable, C group’s provoking action might lead to B group’s violence.

MISPERCEPTION. The likelihood of misperception, according to the inner logic of the security dilemma, should strongly correlate with the severity of the security dilemma, because if information flows freely without any distortion, ethnic groups can easily recognize opposing parties’ true intentions and seek peaceful solutions, rather than resorting to means that are conducive to violence, such as building arms.

FIRST STRIKE ADVANTAGE. Melander gives a convincing argument why first strike advantage is important to the operation of the security dilemma. “The argument goes that when

²⁵ Posen 1991.

different ethnic groups are interspersed in the same territory each side becomes extremely vulnerable to attacks from the other,” and thus in ethnically diverse areas, advantage will be gained if one group strikes first.²⁶ The underlying logic is that ethnic groups will be more likely to use preemptive strike to secure its regional position; otherwise, its power will be undermined if other ethnic groups strike first. I decided to include the same indicator used by Melander for first strike advantage, which is ethnoterritorial dominance.

Variable Operationalization

The work to transform variables into measurable indicators can be difficult because they all have multiple theoretical dimensions with substantial abstractions. I admit that my operationalization of the variables cannot fully capture what those concepts represent, but there is some significant improvement from previous models. Minority at Risk project has collected and compiled quantitative data for a variety of variables related to the characteristics and activities of ethnic groups, which I use for most variables in this study.

Independent Variables

Anarchy: The World Bank has developed the Worldwide Governance Indicators to measure governance and institutional quality. Among those indicators, Government Effectiveness (“capturing perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government’s commitment to such policies”) and Regulatory Quality (“capturing perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development”) are the best available quantitative indicators of anarchy in an ethnic security dilemma context.²⁷ In addition, they are perception-based instead of objective evaluation of governments and therefore are more compatible with a constructivist view of anarchy. I recode these two indicators into one variable, and a lower score indicates higher anarchy.

²⁶ Melander 1999, 81.

²⁷ Kaufmann, Daniel, Kraay, Aart and Mastruzzi, Massimo 2010, 4.

Fear: Melander argues that institutionalized democracy will produce less fear during periods of political transition and therefore he uses democracy as an indicator of fear (measured in the polity3d dataset).²⁸ In addition, democracy may well measure the importance of political institutions rather than fear. Political institutions play an important role in group conflict within a state, so its mitigating effect is expected. Therefore, a more coherent indicator for fear must be found, which, by itself, has no apparent explanatory power of ethnic violence. While restrictions on language or religion are very good indicators of fear, they have the same problem as “democracy.” Shifting focus from the external factors that might produce fear, I believe cultural grievances, which are a clear indication of the cultural fear that ethnic groups have experienced, represent the first two kinds of fear. On the other hand, I will use urbanity to measure the third kind. William Rose examines Monic Toft’s work of the interesting link between settlement patterns and rebellion. Rose derives an important observation from Toft’s finding that “with stronger ties to the land and concomitant decision to remain, rural residents will likely react to possible threats with more fear than urbanities.”²⁹ Thus, the higher the proportion of urban population, the less fear of physical survival within a given geological area. Both cultural grievance and urbanities can be easily operationalized with “cultural grievance” and “urban-rural distribution” variables in the Minority at Risk dataset.

Misperception: While there is no perfect measure of what degree to which ethnic groups will misperceive another party’s intentions, a distinctiveness index best serves this function. If one ethnic group is sufficiently different from another one in terms of language, customs, tradition, it will be difficult to understand the other party’s intentions. Channels of obstructed information or actual occurrences of misperceptions are not measured here, rather the likelihood of their occurrences. Misperception is operationalized by combining two indicators in MaR dataset: “language” and “custom” variable, where higher scores indicate more distinct languages spoken and customs held between ethnic groups.

First Strike Advantage: This variable will be operationalized into “the proportion of group members in regional base” in MaR.

Dependent Variables

²⁸ Melander 1999.

²⁹ Rose 2011, 14.

Two different types of ethnic violence are separately measured. Intercommunal conflict is conflict with other ethnic groups that are not state representatives or dominant groups exercising power. Rebellion, in contrast, requires the opposing ethnic group to be the dominant group in power. My main dependent variable will be Violence, which is the combined score of “intercommunal conflict” and “rebellion”, although the two will be run as dependent variables in separate models for comparative purposes.

Control Variables

Several control variables will be used in various models, including “index of lost political autonomy” (AUTLOST), “separatism index” (SEPX), “political discrimination index” (POLDIS), “economic discrimination index” (ECDIS), “group organization for joint political action” (GOJPA). These variables (all from MaR) are selected such that they can capture a wide range of possible explanations of ethnic violence.

Regression Models

The following are the regression models used to test my hypothesis.

Model 1:

Violence(“intercommunal”+ “rebellion”) =Anarchy+Urban Rural Distribution+ Cultural Grivance+Misperception index+Proportion of members in regional base
+AUTLOST+SEPX+POLDIS+ECDIS+GOJPA

Model 1 includes the four main variables and all control variables. My main focus on this model will be the significance of each variable and the overall validity of this model.

Model 2:

Violence =Anarchy+Urban Rural Distribution+ Cultural Grivance+Misperception index+Proportion of member in regional base

Model 2 is designed to measure the explanatory power of the ethnic security dilemma by examining the R square.

Model 3:

Intercommunal conflict=Anarchy+Urban Rural Distribution+ Cultural Grivance+Misperception index+Proportion of members in regional base

Model 4:

Rebellion=Anarchy+Urban Rural Distribution+ Cultural Grivance+Misperception index+Proportion of member in regional base

Only the dependent variable in Model 3 and 4 differs from Model 2. I break down violence into two distinct types of ethnic violence to see how an anarchic situation will act differently upon them. Intercommunal conflict should be more prevailing than rebellion given any anarchic level since rebellion factors into government control. It is also a way to test the internal validity of the anarchy variable.

Model 5:

Restraint Breakdown=Ethnoterritorial Dominance+Democracy+Political Grievance

In this model, I mimic Melander's research model as much as possible, except that all the data I use is from 2005 (including the use of Polity IV dataset³⁰), while Melander's data is from 1990 to 1994.³¹ This regression model will not only provide a longitudinal study comparison, but also put my model in a comparative context. Several noticeable differences exist in my operationalization: 1) Melander uses 70% as the threshold for ethnoterritorial dominance, while I use 75% due to coding changes in the MaR dataset. However, the difference is negligible and should have minimal impact on my analysis. 2) I substitute separatist grievance for political grievance, which is the closest variable available. According to the new code book, a level of political grievance at three or four represents grievances focused on "creating or strengthening autonomous status" and "creating a separate state for group or revanchist change in borders," respectively.³² It is comparable to the original indicator of Status Quo Utility. 3) Coding for restraint breakdown should have only included cases of intercommunal conflict with a score of

³⁰ Polity IV Project 2010.

³¹ Melander 1999.

³² Minority at Risk 2009, 14.

5 and that have at least 500 casualties. However, a case by case determination of restraint breakdown by examining each conflict's casualty numbers is impossible for this research, and this information is not readily available in any database. Therefore I suppose a limited number of cases may be inappropriately coded.

DATA ANALYSIS

Results

Table 1: Regression Results for Model 1 to 4
Dependent Variable: Ethnic Violence

Independent Variable	Model 1	Model 2	Model 3	Model 4
Constant	-0.212	2.504***	1.937***	0.76*
	(0.913)	(0.795)	(0.509)	(0.429)
Anarchy	-.98	-0.152	(-0.088)	-0.067
	(.100)	(0.102)	0.066	(0.057)
Misperception	-0.017	0.132	0.028	0.062
	-0.205	(0.216)	(0.138)	(0.118)
Urban rural distribution	-.050	-0.131	-0.096	-0.062
	(.133)	(0.141)	(0.091)	(0.079)
cultural grievance	-.345	-0.263	-0.086	-0.156
	(.243)	(0.244)	(0.156)	(0.137)
Regional base-- proportion of group members	0.071	0.157	-0.085	0.21***
	(.144)	(0.137)	(0.088)	(0.076)
Index of lost political autonomy	-0.05			
	(.215)			
Separatism index	-0.108			
	(0.192)			
political grievance	0.237			
	(.185)			
Political discrimination index	0.093			
	(.164)			
Economic discrimination index	0.112			
	(.178)			
Group organization for joint political action	0.881***			
	(.187)			
R-squared	0.207	0.051	0.022	0.08
Adjusted R-squared	0.167	0.03	0.001	0.06
Significance	.000	0.037	0.399	0.001

Note: standard errors in parentheses; *p≤.1, **p≤.05, ***p≤.01

Since ethnic conflict is a complex phenomenon, it is not surprising that even though ten different variables are included in the first model, they only explain twenty one percent of the variance. None of the variables are significant except group organization for joint political action, which is not only significant at a 0.001 level, but also has the strongest effect on violence in the equation. All four main variables intended to operationalize the security dilemma are far from any significance level and thus cannot yield any meaningful interpretations.

Model 2 is significant at .05 level, however, the individual variables are not significant. In addition, the R^2 value is very low, meaning that the equation has little predictive or explanatory power for ethnic violence. Standardized coefficients of all variables have expected signs, indicating that my theoretical expectations are correct. A closer observation reveals that anarchy carries the most weight in the regression.

Model 3 is not significant, and intercommunal violence is hardly explained by the model. Model 4 explains eight percent of the variance in rebellion, which is mostly contributed by the proportion of group members in regional bases (first strike advantage). This variable is significant at the .01 level. A regionally dispersed ethnic group is more likely to have ethnic conflict with a central authority that represents another ethnic group.

The insignificance of my main variables is not a result of multicollinearity. According to the correlation matrix (Table 2), none of variables strongly associate with each other.

Table 2: Pearson Correlation Coefficients for Main Variables

	Anarchy	Misperception	Cultural grievance	Proportion of group members	Urban rural distribution
Anarchy	1	-0.082	.261**	-.253**	.346**
Misperception	-0.082	1	0.067	0.042	-.248**
Cultural grievance	.261**	0.067	1	-.148*	0.08
Proportion of group members	-.253**	0.042	-.148*	1	-.382**
Urban rural distribution	.346**	-.248**	0.08	-.382**	1

Note: ** $p \leq .01$, * $p \leq .05$ (2-tailed).

Table three shows Melander's model using comparable data from different times. In terms of R square, Melander's model does not have any better results. The R square is 5.6%, very close to that of model 2. Political grievance has the most substantial effect on the dependent variable, as it did in 1994 model. In addition, it is significant at 0.001 level. This data suggests that the security dilemma theory has declined in explanatory power.

Table 3: Regression Results for Melander's Original Model and Model 5
Dependent Variable: Restraint Breakdown

Independent Variable	Original	Model 5
Constant	-.652	0.054
	(0.653)	(0.034)
Democracy	-2.8***	-0.006
	(1.075)	(0.03)
Ethnoterritorial Dom.	-3.249***	0.024
	(1.191)	(0.039)
Separatist (Political) Grievances	.9511***	0.148***
	(.836)	(0.044)
R-squared	.507	.056
Significance	.000	.002
N	85	284

Note: standard errors in parentheses; *p≤.1, **p≤.05, ***p≤.01³³

Research limitations

As discussed previously, I encountered many difficulties when trying to operationalize the ethnic security dilemma concept. Thus, one must take into account limitations of my research design when interpreting the results. A salient problem is partial measurement, as indicators cannot fully capture the ethnic security dilemma phenomenon in its entirety. As a result, R square values may be underestimated. In addition, a better time series analysis should also retrospectively apply my regression model to the 1990-1994 data. In addition, although MaR is a very inclusive database to study ethnic conflicts, it has its own case selection criteria that might exclude some important cases.

³³ Results of original research model compiled from Melander 1999.

DISCUSSION AND CONCLUSIONS

Preliminary analysis of the data allows me to derive several observations. First, my data does not support the hypothesis that the greater the presence of ethnic security dilemma conditions, the more severe the ethnic violence. The research model, based on my ways of operationalizing the ethnic security dilemma, suggests that ethnic violence is hardly explained by the theory. Furthermore, ethnic security dilemma's explanatory power has substantially dropped from the previous research.

Do these observations imply that the ethnic security dilemma approach to studying ethnic conflict is unlikely to produce fruitful results in the future? Given the limitations of this research, I am hesitant to give a positive answer. However, if I supplement the quantitative results with a normative analysis, the answer becomes clearer. The two questions I will try to answer in the following analysis are: why is the ethnic security dilemma's explanatory power likely limited to case studies of large scale violence, and what might be the reasons that the theory has become a less compelling explanation of ethnic violence in recent years?

To answer the first question, we need to revisit how the ethnic security dilemma works. The entire causal mechanism is about perception and misperception. It is possible that in some cases, even given the preconditions of the ethnic security dilemma, they will not ultimately fall into a vicious cycle of action and reaction. In other words, the security dilemma can be measured in a continuous scale, but there is a threshold beyond which ethnic violence is triggered. Putting this theoretical explanation at a variable level, we can expect that only if anarchy, fear, and first strike advantage are large enough that they will have substantial impact on ethnic group behaviors. Thus the relationship between ethnic security dilemma and ethnic violence is non-linear.

In addition, the security dilemma is a broad conceptual frame used to think about the inner dynamics of how conflict arises and its path to some larger violence. A case study or content analysis that fit relevant factual information into this theory framework may give a better holistic picture of what happens for a given conflict dyad.

The research design of Melander incorporates the possibility of a non-linear relationship between the ethnic security dilemma and ethnic violence by making specific cutoffs in coding

independent variables and dependent variables and transforming them into dummy variables. So naturally we have to ask, given that model 5 only examines ethnic violence on a discrete scale, why has the explanatory power of the ethnic security dilemma is still remained very low, and in fact, has decreased significantly from previous years of study?

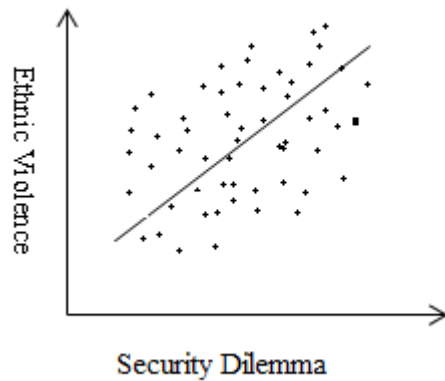
To answer this question, we need to examine the theory in a larger context. As a matter of fact, the number of ethnic wars (large-scale violence) in the new century dramatically dropped compared to that of the early 1990s. As Ted Gurr points out:

“...Many new multiethnic democracies have been consolidated, international doctrine and practices for containing deadly ethnic conflict have been evolved. The UN, regional organizations in Europe and Africa, and major powers have become more proactive in answering ethnic quarrels. The net effect has been not to put an end to ethnic conflict but rather to contain some of its worst consequences and to channel the political energies of mobilized ethnic groups into conventional politics.”³⁴

The ethnic security dilemma theory was originally used to examine ethnic violence in post-imperial and post-Cold War periods. However, unlike 20 years ago, the political environment of both states and international society are less likely to produce a security dilemma because mechanisms in place will not allow situations of a minor anarchic situation to materialize into a major ethnic security dilemma.

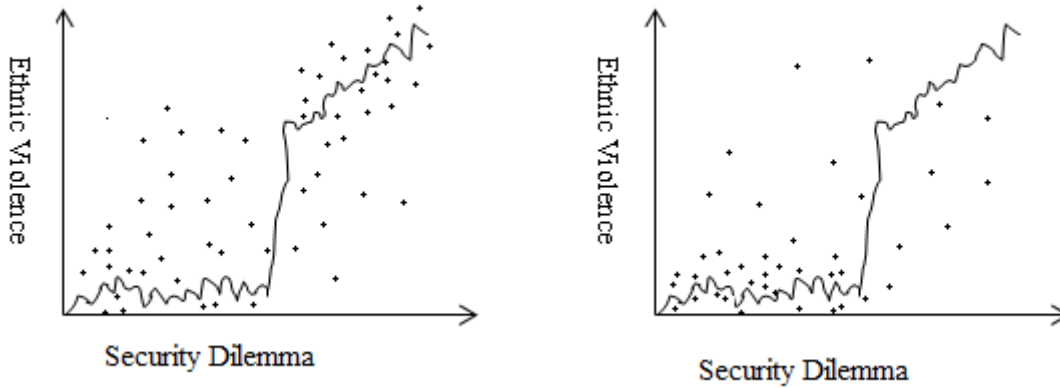
Figure 1 is a linear regression model consistent with our research approach. But as discussed earlier, the relationship might be better represented in the graph 2 and 3 discrete models where less severe ethnic security dilemma does not cause ethnic violence but when the severity of our independent variable passes certain point, it becomes strongly correlated with ethnic violence.

³⁴ Minority at Risk 2009, 14.

Figure 1: Linear model

The differences in preconditions of the security dilemma and the occurrence of ethnic violence between two different times is demonstrated. In Graph 2, data is evenly spread along combinations of mild ethnic security dilemma- ethnic violence and severe ethnic security dilemma-severe ethnic violence where our lines lie. Therefore, Melander's model is valid in explaining a large part of the variance. However, in more recent years, conflicts clustered mainly around the lower ends of both spectrums of ethnic violence and security dilemma where the model has little explanatory power.

Figure 2: 1994 Discrete Model (Melander original) **Figure 3:** 2005 Discrete Model (Model 5)



Note: the graphs do not use any actual cases to plot the data points. They are hypothetical situations used for theoretical illustration purpose only.

This qualitative analysis provides possible explanations for my observations of the quantitative data as well as strengthens the conclusion of this study. Therefore, future research should cautiously analyze the case at hand in order to make a sound decision about the methodology that will be used in a study. As I point out, changes in a variety of factors may have rendered the ethnic security dilemma theory, to some extent, obsolete. Thus, a mass quantitative application is unlikely to provide meaningful insight in the future.

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