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Abstract

The article debunks the conception that peace agreements are all equal. Distinct from the conventional monocausal assessment, I view the peace agreement as a cohesive whole and evaluate its strength in terms of its structural and procedural provisions. I use data on the length of intrastate peace episodes during the period from 1946 to 2010. My key finding is that the design quality of the peace agreement has a significant impact on the durability of peace. Agreements that are carefully designed to deal with all obstacles to cooperation have the strongest pacifying effect among armed conflict outcomes. The article sets forth ways to sharpen the performance of conflict management operations in war-torn countries.

Keywords

Conflict management, conflict termination, peace agreement design, peace agreement theory, sustainable peace

Introduction

The phenomenon of the peace agreement has puzzled contemporary international relations for years. By signing a settlement agreement, belligerents declare that they are willing to give peace a chance. Yet, some intrastate peace agreements fall apart within months, whereas others last for years, and still others seem to last indefinitely. The General Peace Agreement in the Philippines in 1995, for instance, broke down within two years, whereas the Chittagong Hill Tracts Peace Accord in Bangladesh in 1997 is still holding. Similarly, the Lusaka Protocol failed to bring peace to Angola in 1994, whereas the Luena Agreement succeeded in 2002. What causes this inconsistency among intrastate peace agreements?

On a number of occasions, peace agreements have been treated as a monolith in peace literature. Despite the efforts of some distinguished scholars, the amount of theoretical and empirical work that has been done to explore design variations among peace agreements is not commensurate with the rising global concern about the stability of post-conflict

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societies. Furthermore, previous research on peace agreements has rarely addressed the connection between the decision to seek peace and the durability of peace. Peace is not sought at random. Factors that affect when and why belligerents decide to lay down arms and pursue peace have some bearing on how long peace lasts. In this paper, I develop an integrative framework of analysis, and investigate the effect of design quality variations among negotiated agreements on peace. I also account for the self-selectivity of peace spells by simultaneously estimating a selection equation that describes the propensity to have a peace spell and a duration equation that describes the peace duration outcome.

There have been five times more intrastate peace agreements in the two decades that followed the Cold War than during the entire Cold War. Notwithstanding the recent increase in the number of peace agreements, there is still little that we scientifically understand about how, when and why peace agreements produce their favorable effects. I propose a peace agreement theory to argue that the design quality of the peace agreement has a significant effect on the longevity of the cooperative interaction between those who sign it. The intuition of my approach is that peace does not fail because of moral depravity. It fails because of excessive complexity in interaction that emerges from conflict of interests, preferences and values, leading it to become unmanageable by existing institutions. Outworn institutions that mismanage interaction are equally harmful. Peace agreements allow for the development of more efficient institutions, thereby providing the means for managing such complexity.

For the purpose of my analysis, I build on Bell's (2008: 305) definition of the peace agreement and the criteria used in the Uppsala Conflict Data Program (Hogbladh, 2006). I define the peace agreement as a consensual contract between some or all conflict protagonists to settle all or part of the incompatibility and regulate future interaction, with a view to ending armed conflict. I view the peace agreement as a connected sequence of pacts rather than an isolated deal; it is the overall contract that emerges gradually from the peace process. This contract often consists of several partial agreements; every one of them tackles one side of the dispute. Therefore, series of interrelated accords within the same peace process are considered one peace agreement in my analysis, regardless of the duration of the peace process, as long as the final act in the peace process confirms these accords and puts them into effect. For example, the sequence of connected joint proposals, declarations and partial agreements that terminated the armed conflict in Mexico in 1996 count as one comprehensive peace agreement—the San Andres Accord. The success of the peace agreement and the stability of peace are defined in terms of the absence of armed conflict.¹

Functional or epiphenomenal: the state and the debate

There is a growing minority in peace literature, such as Walter (2002) and Hartzell and Hoddie (2007), who argue that the institutional design of the peace agreement is one of the determinants of the stability of peace. This group of studies defends peace agreements against neorealist-like claims that agreements are little more than ciphers for state power, interest and concern with relative gains. However, none of the previous studies that argue that peace agreements have intrinsic causal significance has provided an integrative synthesis of all the major problems that face would-be peace partners in the aftermath of armed conflict. As a result, assessments have been incomplete.

A wide range of obstacles face would-be peace partners in the aftermath of armed conflict. These obstacles include: (1) security problems (see, e.g. Hartzell et al., 2001); (2)

informational problems (see, e.g. Mattes and Savun, 2010); (3) commitment problems (see, e.g. Walter, 2002); (4) implementation and enforcement problems (see, e.g. Jarstad and Nilsson, 2008); (5) distributional problems (see, e.g. Fearon, 1998); (6) governance problems² (see, e.g. Lake and Rothchild, 2005); and (7) management problems³ (see, e.g. Chayes and Chayes, 1995). It is noteworthy that these problems are interrelated and, in some situations, inseparable or undistinguishable.

However, previous assessments of agreement efficacy have often been monocausal. Theorists have sometimes gone to the extent of making it sound as though every armed conflict could be settled permanently by resolving the one or two particular problems articulated in her or his study, which is obviously untrue. The often imbalanced emphasis on some but not all of the aforementioned problems has resulted in a biased reading of cases, where the analytical priority is given to only a few isolated and presumably self-sufficient provisions. Third-party security guarantees, territorial autonomy and power-sharing are the most studied provisions in peace literature (see, e.g. Derouen et al., 2009; Hartzell et al., 2001; Mattes and Savun, 2007; Walter, 2002). Other provisions have received less attention. Many conflict situations, however, are likely to combine the majority, if not all, of the discussed problems. I provide a comprehensive examination of the peace agreement as one functional whole. I assume that the obstacles to cooperation are equally capable of frustrating peace. The peace agreement is like a chain of provisions; any weak link in the chain is enough for it to snap. A deficiency in one of the cooperation areas in the agreement could be the key to understanding its failure.

In general, the counterargument to the causal significance of the peace agreement suggests that peace agreements do not have an autonomous effect. Instead, conditions that lead belligerents to pursue peace determine the durability of peace. The gist of the counterargument is that peace agreements screen but do not constrain.

There are incompatible propositions in the literature regarding the endogeneity of international agreements. Downs et al. (1996) argue that states choose to comply with treaties that do not require much enforcement, and are expected to be complied with. Hence, treaties screen actors for compliance. Conversely, Chayes and Chayes (1995) posit that compliance is a management problem, and that designing effective strategies in the treaty enhances compliance. Hence, treaties constrain the behavior of their parties. I argue that peace agreements constrain and screen simultaneously, and neither function undermines the other. Actors invest their time and resources in agreements that are relevant and capable of altering interests and strategies of others by increasing the cost that inconsistent behavior inflicts on the reputation and the legitimacy of the party. As agreements entail ratification costs, commitment is not random. If it was, commitment would hardly be credible. Only those parties that have the resolve to achieve and maintain peace would join it. However, this does not make peace agreements ineffectual (Simmons and Hopkins, 2005).

A peace agreement theory

Peace agreements institutionalize peace. They establish a system of overt and implicit rules that help structure the activities of parties and the interaction between them. By establishing rules, peace agreements simultaneously enable and constrain the behavior of their signatories. The primary effect of institutionalization is an efficiency effect, in that it offers parties an opportunity to unlock hidden value and reach an arrangement of maximum mutual gain.

Moreover, peace agreements legalize peace. Although not binding in the traditional sense, peace agreements enjoy a legal force. As Abbot et al. (2000) put forward, there are three dimensions to legalization: obligation, precision and delegation. These criteria for legalization move beyond the narrow view of law as requiring enforcement by a coercive authority resembling that of domestic law. In peace agreements, obligations and commitments are outlined, rules are laid down, principles are affirmed, and authority for interpretation and dispute resolution is routinely delegated to a joint commission, a high court of justice, or an outside party. The primary effect of legalization is that it raises the cost of violating the peace agreement. Legalization also strengthens the credibility of commitments, improves the enforceability of the settlement and resolves problems of incomplete contracting: those that arise from bounded rationality, risk-aversion of actors and the pervasiveness of uncertainty about future contingencies (Abbott and Snidal, 2000).

Peace agreements are self-sustaining when they succeed in producing behavioral regularities and preferences that are consistent with the reproduction of cooperation; if not, they fail. However, self-sustainability cannot be achieved without initial policing. Hence, cooperative interaction fashioned by strong peace agreements is continuously rationalized with the passage of time. This provides the basis for my argument that compliance enhances compliance. In my view, the consolidation of peace institutions is an incremental process in which opportunities seized in the short run create long-term gains that may be unanticipated.

Although peace agreements are designed to address particular conflicts and are customized to parties' demands, broad parameters that fit most conflict situations can be identified. The design quality of the peace agreement is determined by the number of mechanisms it contains to address impediments to cooperation. These mechanisms constitute the elements of its design. Peace agreements are not all equal. The more mechanisms the agreement contains, the better its design quality is. I build the notion that added mechanisms strengthen the agreement upon the perspective that a fully transformed agonistic interaction is more durable than a partially transformed one. The value of a comprehensive agreement emanates from recognizing the complex interrelationship among the political, economic, social, cultural and legal foundations of a relationship, even if parties are only contesting political arrangements. Comprehensiveness also increases the cost of implementation, and thus improves the credibility of commitment.

A comprehensive survey of contemporary intrastate peace agreements identifies 18 prototypes of provisions associated with the resolution of impediments to cooperation. These prototypical provisions are all-inclusive of content variations among surveyed intrastate peace agreements. I divide these prototypes into two clusters: structural and procedural. Each contains nine agreement components. The structural components are provisions that are designed to address, manage or resolve structural causes of conflict and are generally related to state- and peace-building. The procedural components are temporary processes, procedures and arrangements that are designed to facilitate the achievement of the structural objectives of the agreement (Ouellet, 2004). The prototypical structural provisions are: (1) political regulation and reform pacts; (2) economic recovery and structural reform mechanisms; (3) cultural and social reform provisions; (4) self-determination mechanisms; (5) transitional justice mechanisms; (6) security sector reform provisions; (7) judicial and/or constitutional reform provisions; (8) human rights provisions; and (9) refugees and internally displaced people provisions. The prototypical procedural provisions are: (1) third party security guarantees; (2) monitoring and verification mechanisms; (3) confidence-building measures; (4) dispute resolution measures; (5) enforcement of a supreme law provisions;

(6) civil society involvement provisions; (7) reconciliation mechanisms; (8) third-party participation in social, economic or political reconstruction, recovery and reform; and (9) time frame, renegotiation and escape (i.e. transformative flexibility) provisions.⁴

These prototypes are not mutually exclusive. There are synergistic interrelationships among them. However, the aforementioned prototypical provisions remain the principal pillars of an ideal peace settlement. It is worth noting that intrastate peace agreements contain on average seven structural provisions and six procedural provisions. Two-thirds of agreements contain between nine and 16 prototypical provisions. The weakest agreement is exemplified by the Bangui-2 Agreement in Chad in 1994, which contains only four prototypical provisions. The strongest peace agreement is exemplified by Kosovo Peace Agreement in former Yugoslavia in 1999, which contains 18 prototypical provisions.

Agreement mechanisms are interdependent and the effectiveness of one mechanism impinges on the effectiveness of another. The effect of an individual provision partially depends on the pact of provisions that accompanies it. Consequently, the effect of every provision is a hybrid of a communal effect that it partakes in with other provisions, a distinctive effect that it does not share with other provisions, in addition to a stochastic element. The communal effects capture associations among prototypical provisions. They may be thought of as underlying design dimensions that cause the manifest provisions to covary. The strength of the link between each underlying dimension and each provision varies, such that a given design dimension is associated with some provisions more than others. The unique effect and the communal effect of every prototypical provision often complement each other. However, reducing the effect of provisions to a few underlying dimensions or confining it to the unique contribution of individual provisions results in a loss of valuable information. Regrettably, previous studies have routinely swept the communal effect of provisions under the rug. No testing of the underlying constructs of peace agreement provisions has been conducted to date.

To detect structure in the relationship among the 18 provisions and reveal underlying design dimensions that cause provisions to covary, I perform a common factor analysis. The analysis yields five reliable and internally consistent oblique design dimensions.⁵ To facilitate the discussion, these design dimensions are labeled as follows: (1) social consolidation of peace; (2) rebuilding of trust; (3) prevention of the resumption of violence; (4) redrawing of the perimeters of political interaction; and (5) dealing with urgent concerns. Table 1 maps the connection between the 18 prototypical provisions and the seven cooperation impediments they help overcome, and displays the factor loading matrix for the final solution. Note that the connection between a provision and a cooperation problem is based on commonness and not exclusivity.

The previous discussion provides a number of hypotheses that illuminate the practical question of why and how peace settlements affect the durability of peace. The two general hypotheses of the peace agreement theory are:

Hypothesis 1: Peace agreements enhance the durability of peace.

Hypothesis 2: Improving the overall design quality of the peace agreement enhances the longevity of peace.

The superiority of military victory to other types of armed conflict termination in its effect on post-conflict stability has been a long-standing proposition in the literature on peace (See, e.g. Licklider, 1995; Maoz, 1984). The chief explanation for this superiority is that a military

Table 1. Factor loadings and uniqueness of prototypical provisions based on common factor analysis ($N = 75$). Factor loadings < 0.3 are suppressed

Prototypical provision	Design dimension			Uniqueness	Cooperation problems it helps overcome
	Social consolidation of peace	Rebuilding of trust	Prevention of violence resumption		
1. Political regulation and reform				0.08	Distributional, governance and management
2. Economic recovery and reform	0.82			0.15	Distributional, governance and management
3. Cultural and social reform	0.90			0.16	Governance
4. Self-determination	0.65	-0.57		0.29	Security, distributional and governance
5. Transitional justice		0.60		0.38	Security, governance and commitment
6. Security sector reform				0.07	Security and implementation
7. Judicial and constitutional	0.46			0.03	Implementation and governance
8. Human rights	0.52			0.11	Commitment and governance
9. Refugees and internally displaced persons			0.68	0.38	Commitment and governance
10. Third party security guarantees			0.77	0.18	Security, commitment and implementation
11. Monitoring and verification		0.74	0.40	0.10	Implementation, security and informational
12. Confidence-building		0.34	0.76	0.08	Security and informational
13. Dispute resolution	0.53		0.64	0.19	Commitment and management
14. Enforcement of supreme law	0.84			0.26	Implementation and governance

(continued)

Table 1. (Continued)

Prototypical provision	Design dimension			Uniqueness	Cooperation problems it helps overcome
	Social consolidation of peace	Rebuilding of trust	Prevention of violence resumption	Redrawing of interaction perimeters	Dealing with urgent concerns
15. Civil society involvement	0.32	0.83		0.15	Implementation and governance
16. Reconciliation		0.92		0.10	Commitment and security
17. Third-party assistance				0.83	Distributional, implementation and management
18. Transformative flexibility	0.37			0.32	management
				0.51	Distributional, implementation and management

triumph allows the victor to consolidate its power and gain full control over the instruments of the government. This produces large power asymmetry and increases the cost of retaliation (Wagner, 1993). I argue that a well-designed peace agreement is more sustainable and enduring than a military victory. A military victory does not surmount impediments to long-lasting peace as efficiently as a strong quality peace agreement does. A well-crafted peace agreement is more efficient than a military victory in dealing with post-conflict distributional, management and governance problems, and at least as efficient as a military victory in dealing with post-conflict security, informational and enforcement problems. This discussion introduces two additional hypotheses.

Hypothesis 3: Peace is less durable following a peace agreement than following a military victory.

Hypothesis 4: Peace that follows a strong quality peace agreement is more enduring than peace that follows a military victory.

Research design

Model selection

To estimate the duration process and correct for selectivity bias, I utilize the FIML estimator proposed by Boehmke et al. (2006). The FIML procedure explicitly estimates the statistical link ρ , thereby allowing me to make inferences about the interconnection between the decision to seek peace and the duration of peace. I model the selection process as a discrete outcome (probit model): parties either lay down arms and pursue peace or continue fighting. At the same time, I model the duration process as a continuous outcome (Weibull model): peace continues to survive until parties resume militarized conflict. The Weibull model is chosen because I have a substantial interest in the tendency of peace to enhance itself with the passage of time. Because factors associated with the transition process do not grow in value as peace endures, I use time-independent covariates in my duration analysis. However, I use time-variant covariates to estimate the likelihood of the decision to lay down arms and seek peace at different moments during the armed conflict episode.

Dataset format and unit of analysis

I construct a dataset to examine the relationship between the predictor variables and the duration of peace. I employ the concept of conflict episode, offered by Kreutz (2010). I use the term “conflict episode” to refer to a continuous period of fighting between a pair of actors. I divide every armed conflict into multiple episodes based on the number of participants and periods of inactivity. A conflict episode ends if it becomes inactive for at least one year or if it is decisively terminated. A peace episode is alternatively defined as a continuous period of peace uninterrupted by armed conflict. The utility of the episode concept is that it provides a better approximation of the immediate causes of armed conflict and peace and accounts for progress and change within a relationship. It also allows short-term terminations to be accounted for.

My case selection criterion is to include all intrastate armed conflict episodes that began between 15 August 1945, V-J Day, and 1 January 2010, whether these conflicts are still ongoing, were terminated by peace agreements or otherwise. The peace episode is included in the analysis only when the conflict episode is fully observed. The variable (failed) is

created to portray how the observation exited the risk period, where 1 denotes the recommencement of militarized conflict, and 0 denotes right censoring.

The dyad is the basic unit of interaction whose characteristics and parties' behavior are observed in the dataset. Multilateral conflicts are broken into separate dyads. Intrastate armed conflicts are fought between the government and an armed rebel group. Because observations within the same conflict episode are not independent from one another, I cluster my estimates by conflict episode. This allows me to relax the assumption of independent observations.

The unit of observation for the duration analysis is a peace episode in a dyad. The base set of cases for the selection analysis is an armed conflict dyad year. Note that the analysis shifts from the annual observation of the conflict episode in the selection analysis to the entire episode of peace in the duration analysis. I use the Uppsala Conflict Data Program (UCDP) definition of armed conflict.⁶ In my view, the threshold of 25 deaths annually per dyad is high enough for the violence to represent a politically significant event that warrants conflict management procedures. Data on conflict parties is taken from the UCDP Dyadic Dataset (version 1.0) (Harbom et al., 2008).

The dataset contains 2255 annual conflict observations from 531 armed conflict episodes. The 531 armed conflict episodes resulted in 358 peace episodes. Forty-five armed conflict episodes were still ongoing in 2010. There are 128 conflict episodes without sufficient information to confidently determine whether and how they were terminated.⁷

Operationalization of variables and data sources

The dependent variables. I measure the duration of peace by calculating the total time elapsed since the end of the last episode of armed conflict until the beginning of a new episode of armed conflict, or the year 2010. The dependent variable in the selection equation is a dichotomous indicator (select), denoted 1 if the parties mutually lay down arms and seek peace in that year, and 0 otherwise. The dyadic decision to lay down arms and pursue peace is operationalized as a significant de-escalation in military operations by both parties for at least one calendar year, or the formal termination of military operations for any period of time.⁸ I rely on the UCDP datasets for coding my dependent variables. The median duration of peace in the dataset is 14.5 years.

The independent variables. I measure the design quality of the agreement in two ways. One is a simple additive index that sums up the number of its structural and procedural prototypical provisions. This measure accounts for the communal and unique effects of provisions. It is crude but objective and easily replicable by others. It ranges from 0 to 18. The second is a composite scale that sums up the factor scores on the five underlying design dimensions. The factor score for each underlying design dimension is created by adding up the factor loadings of all prototypical provisions loading above the cut-off value of 0.3 on that dimension. This measure accounts for the communal effect of provisions only. It ranges from 0 to 15.36. For instance, the Good Friday Agreement between the British and the Irish Governments and the Real Irish Republican Army in 1998 contained 15 prototypical provisions, and thus attains 15 on the simple additive index. However, when taking into account overlap among prototypical provisions and the contribution of each of its provisions to the five underlying design dimensions, the agreement score becomes 12.6 (which is the score that the agreement

receives on the composite scale). For data on the provisions of the peace agreement, I rely on the texts of peace agreements provided by the UN Peacemaker online library (United Nations Department of Political Affairs, 2010), the Accord Peace Agreement Index (Conciliation Resources, 2010), the Studemeister Digital Collection of Peace Agreements (United States Institute of Peace, 2010), the INCORE Collection (Bell and O'Rourke, 2009), the UCDP Conflict Encyclopedia (Uppsala Conflict Data Program, 2010) and the UCDP Peace Agreement Dataset (version 1.0) (Harbom et al., 2006). None of these databases is exhaustive. Every effort was made to locate the official text, or if not, the summary of the peace agreement. A total of 62 peace agreements are included in the analysis. Of these 62, there are three without sufficient information about the design.

Conflict termination is measured by four dummy variables: one for termination by a peace agreement; one for a military victory; one for a ceasefire agreement; and one for an indecisive outcome (the base category). A ceasefire agreement occurs when conflict parties agree to terminate military operations without settling any part of their incompatibility.⁹ An indecisive outcome is operationalized as the termination of conflict without a decisive victory or any type of agreement.¹⁰ Data on termination types is taken from the UCDP Conflict Termination Dataset (version 2.1) (Kreutz, 2010). Additional cases were coded in accordance with the codebook. However, I do not apply a temporal limit between the date the fighting ended and the signing of the peace agreement. I consider all peace agreements that follow armed conflicts as long as the peace process that produces them begins within one year of the cessation of military operations.¹¹ With 42%, indecisive outcomes are the most common intrastate termination type. Only 22% of conflict episodes were terminated by a peace agreement.

Control variables. I include five control variables in my analysis. A sixth control variable, the Cold War, is only used in the selection stage. First, I distinguish between conflicts over government and conflicts over territory. Peace is less achievable in territorial conflicts because they require distributive settlements that divide a fixed pool of resources. Conversely, an integrative settlement that invents a mutual gain greater than the sum of individual gains can more easily be achieved in conflicts over government. Peace in the aftermath of territorial conflicts has also been found to be less enduring. The general explanation for the intractability of territorial conflicts rests on the tangible and intangible values of territory, especially in terms of resources, population, strategic location and symbolic value for national identity and cohesion (Hensel, 2000: 58-61). Conflict issues are measured by a dummy variable denoted 1 if the incompatibility relates to the status of a territory, and 0 if the incompatibility concerns regime type, replacement of the central authority or the composition of the government (Harbom and Wallensteen, 2009). For data, I rely on the UCDP Dyadic Dataset (version 1) (Harbom et al., 2008).

I also account for conflict cost and duration; both are often found to be negatively associated with the risk of armed conflict recurrence as suggested by the war-weariness hypothesis (Gurses et al., 2008; Quinn et al., 2007). Conflict cost and duration, however, have an opposing effect on the belligerents' decision to seek peace. As the armed conflict endures and costs accumulate, positions become polarized, an economy of armed conflict grows and attitudes become too inflexible. This argument is consistent with what I term the "compromise-aversion hypothesis": parties that have endured long and costly armed conflict for a cause are less likely to accept a compromise solution on that cause. Therefore, the best chances for peace

are at the beginning of armed conflict before adversaries inflict heavy losses on each other. Conflict cost is measured as the total number of battle-related deaths. Data on conflict cost is derived from the PRIO Battle Death Dataset (version 3) (Lacina and Gleditsch, 2005). I rely on PRIO's best estimate of annual battle fatalities. If not available, I calculate the average. Because change in the duration of peace is a percentage of conflict cost not an absolute value, the natural logarithm is used for better fits. Conflict duration is calculated in days and presented in a yearly format. Duration of one or two days is rounded to 1%. Data on conflict duration is taken from the UCDP Dyadic Dataset (version 1) (Harbom et al., 2008) and the UCDP/PRIO Armed Conflict Dataset (version 4) (Gleditsch et al., 2002; Harbom and Wallensteen, 2009).

The fourth control variable is political regime type. Owing to the prevalence of conciliatory norms of dispute resolution in democratic states, they are more disposed to adopting compromise solutions in domestic affairs than nondemocratic states (Dixon, 1993). Yet, several studies have suggested that anocracies exhibit a higher propensity for conflict than either democracy or autocracy. This propensity pattern is explicable by the institutional contradictions of anocracies as being partly repressive, which leads to grievances, and partly open, which facilitates mobilization against the regime (Hegre et al., 2001). To measure the effect of political regime type, I use a composite country regime score drawn from the scale of the Polity IV project, and taken for the year prior to the year of observation. I use the revised Polity score, which applies a fix to convert instances of standardized authority scores (Marshall et al., 2010). I add a quadratic formulation of regime score to account for the parabolic relationship between political regime and the durability of peace.

I also account for the multilaterality of interaction, defined as the participation of more than two parties. Multilaterality reduces the individual shares of benefits, and thus worsens chances of settlement. However, multilateral solutions are more stable once achieved because multilaterality distributes the costs of compliance and the costs of verification among parties, and hence reduces the individual costs. To measure the effect of multilaterality, I create two dummy variables: the first, used in the selection analysis, is coded 1 if the armed conflict in that year involves more than one dyad simultaneously, and 0 otherwise. The second, used in the duration analysis, is coded 1 if the given conflict termination resulted in more than one dyadic peace episode, and 0 otherwise.

Finally, the bipolarity of the international system during the Cold War era had an effect on the achievement of peace within states. Many intrastate armed conflicts during the Cold War period were fought as proxy conflicts in which superpowers actively provided arms and aid to their favored side, as well as hindering international conflict management endeavors. This held armed conflicts at a deadly equilibrium (Kalyvas and Balcells, 2010: 416). Therefore, I account for the selection effect of the Cold War.¹² The selection effect of the bipolar Cold War system is measured by a dummy variable that takes the value 1 if the armed conflict observation occurs during the Cold War (1946–1990), and 0 otherwise.

Notably, belligerents' mutual decision to make peace is not random, and this decision has a nontrivial impact on the endurance of peace.¹³ The decision to seek peace is affected by unobserved factors (such as the mindset of leaders toward peace) and observed factors. The observed and unobserved decision factors may also influence the stability of peace. High levels of resolve to settle conflict among belligerents have a positive impact on the endurance of peace. Unfortunately, levels of resolve may be known to decision-makers, but the researcher's ability to capture and measure this information is limited.

inverted
U shape

Quantitative analysis

full information maximum likelihood est = FIML

To examine my propositions, I estimate the effect of the peace agreement on the duration of peace spell, conditioning by the selection and duration factors. Table 2 displays the results. In the first column, I report the results of estimating the selection process alone using a probit model. In the second column, I report the results of a naive duration model that neglects selection bias.¹⁴ In the third column, I report the results from a simple FIML model that contrasts termination types but excludes conflict characteristics and interaction conditions. In the fourth column, I incorporate the control variables in the FIML model.¹⁵

The quantitative evidence taken from model 3 supports hypothesis 1 that peace agreements have a significant pacifying effect, as predicted by the peace agreement theory. The significant and negative coefficient indicates that a peace agreement reduces the risk of another armed conflict, *ceteris paribus*. The risk of peace failure following a peace agreement is only 24.6% of the risk of failure following an indecisive outcome (the omitted, comparison category). The risk of peace failure following a military victory is 20.9% of the risk of failure following an indecisive outcome. Furthermore, a robustness check demonstrates that the relationship between peace agreements and the durability of peace remains statistically significant when any of the control variables is omitted from the model. This finding refutes the epiphenomenal proposition that peace agreements have no independent effect on the persistence of peace.

To evaluate the effect of design quality on the durability of peace, I re-estimate model 3 using the design quality crude index (model 4) and the composite scale (model 6). I also divide each measure into five ranges (models 5 and 7). The results are displayed in Table 3.¹⁶

The results from models 4–7 point to the same conclusion: the design quality of the peace agreement has a statistically significant impact on halting armed conflict recurrence, as predicted in hypothesis 2.¹⁷ Every additional prototypical mechanism reduces the risk of peace failure by one-sixth. A well-designed agreement leads to durable peace, whereas a poorly designed agreement is tantamount to a haphazard termination of fighting.

To compare the peace agreement to the military victory, I re-estimate model 3 using military victory as a reference category (model 8). I then compare ranges in the design quality measures to military victory (models 9 and 10). The results, displayed in Table 4, suggest that the pacifying effects of peace agreements and military victories are statistically indistinguishable, which negates hypothesis 3. The results, however, support hypothesis 4; peace is considerably more enduring following an ideal agreement than following a military victory.¹⁸

I also examine the individual contribution of the five underlying design dimensions. Because dimensions were allowed to overlap, their effects are assessed independently. The results, reported in Table 5, show that all five underlying design dimensions are associated with durable peace.

The quantitative analysis provides a number of important findings in relation to the selection and process factors. The significance of the ρ statistics indicates that there is a selectivity bias that affects the occurrence of peace. Unobserved factors that affect the decision to seek peace, such as parties' level of resolve to transform armed conflict, also determine how long peace lasts.¹⁹ The value of the parameter ρ , which is statistically significantly less than 1, indicates that the hazard of armed conflict declines as peace survives. Peace is most fragile when it is still young and becomes more stable as it endures. This finding provides support for the proposition that cooperation promotes further cooperation.

Table 2. The selection, the naive duration and the FIML models

Coefficient (robust standard error)	Selection of peace (probit)	Survival of peace 1 (naive Weibull)	Survival of peace 2 (simple FIML)	Survival of peace 3 (FIML)
Selection				
Territorial incompatibility	−0.220*** (0.074)		−0.199*** (0.061)	−0.205*** (0.061)
Conflict duration	−0.026*** (0.006)		−0.019*** (0.004)	−0.018*** (0.004)
In Conflict cost	−0.121*** (0.019)		−0.100*** (0.015)	−0.099*** (0.015)
Cold War	−0.313*** (0.079)		−0.283*** (0.066)	−0.288*** (0.066)
Democracy	−0.032*** (0.006)		−0.028*** (0.005)	−0.028*** (0.005)
Multilateral armed conflict	−0.427*** (0.085)		−0.360*** (0.067)	−0.366*** (0.067)
Constant	0.516*** (0.150)		0.682*** (0.132)	0.672*** (0.132)
Duration				
Peace agreement		−1.914*** (0.452)	−1.897*** (0.440)	−1.402*** (0.338)
Ceasefire agreement		−0.003 (0.330)	0.307 (0.318)	−0.057 (0.246)
Military victory		−2.111*** (0.396)	−2.359*** (0.383)	−1.565*** (0.316)
Territorial incompatibility		0.565** (0.253)		0.464** (0.195)
Conflict duration		0.035* (0.019)		0.028* (0.015)
In Conflict cost		−0.042 (0.052)		−0.001 (0.039)
Democracy		0.022 (0.018)		0.023* (0.014)
Democracy squared		−0.009** (0.004)		−0.007** (0.003)
Multilateral peace		−0.459 (0.376)		−0.289 (0.268)
Constant		−1.732*** (0.439)	−2.296*** (0.132)	−1.150*** (0.339)
ρ (Duration dependence)		0.551***	0.547***	0.407***
ρ (Error correlation)			−0.105***	0.250***
N Uncensored	2255	358	2255(358)	2255 (358)
Log pseudo-likelihood	−858.719	−337.576	−1297.65	−1291.323
Wald	226.12***	69.84***	209.84***	207.58***

Note: Robust standard errors cluster on armed conflict episode. *** $p \leq 0.01$; ** $p \leq 0.05$; * $p \leq 0.10$.

As for the selection process, peace is less likely when the incompatibility is territorial, when the conflict lasts longer, when conflict cost increases, when the fighting occurs during the Cold War, when the state is more democratic, and when the armed conflict is multilateral. Turning to the duration part of the FIML models, the results show that territorial was the selection model and the duration model estimated together/same time?

Table 3. Design quality and the durability of peace

Coefficient (robust standard error)	Survival of peace 4 (FIML)	Survival of peace 5 (FIML)	Survival of peace 6 (FIML)	Survival of peace 7 (FIML)
Selection				
Territorial incompatibility	-0.197*** (0.062)	-0.196*** (0.062)	-0.197*** (0.062)	-0.195*** (0.062)
Conflict duration	-0.018*** (0.004)	-0.018*** (0.004)	-0.018*** (0.004)	-0.018*** (0.004)
In Conflict cost	-0.099*** (0.015)	-0.099*** (0.015)	-0.099*** (0.015)	-0.099*** (0.015)
Cold War	-0.294*** (0.066)	-0.294*** (0.066)	-0.294*** (0.066)	-0.294*** (0.066)
Democracy	-0.028*** (0.005)	-0.028*** (0.005)	-0.028*** (0.005)	-0.028*** (0.005)
Multilateral armed conflict	-0.359*** (0.067)	-0.358*** (0.067)	-0.359*** (0.067)	-0.358*** (0.067)
Constant	0.664*** (0.132)	0.664*** (0.132)	0.665*** (0.132)	0.664*** (0.132)
Duration				
Agreement design quality (objective index)	-0.129*** (0.034)			
Weak (<8)		-1.315* (0.769)		
Moderately weak (9–10)		-1.186 (0.756)		
Middling (11–13)		-1.184** (0.550)		
Moderately strong (14–16)		-1.726** (0.809)		
Ideal (17–18)		-13.798*** (0.333)		
Agreement design quality (composite scale)			-0.155*** (0.042)	
Weak (<5.99)				-1.290* (0.763)
Moderately weak (6–8.74)				-1.226 (0.780)
Middling (8.75–11.49)				-1.284** (0.548)
Moderately strong (11.5–13.49)				-1.428* (0.804)
Ideal (13.5–15.36)				-16.255*** (0.301)
Ceasefire agreement	-0.053 (0.247)	-0.056 (0.248)	-0.051 (0.247)	-0.057 (0.247)
Military victory	-1.552*** (0.316)	-1.552*** (0.315)	-1.551*** (0.316)	-1.557*** (0.316)
Territorial incompatibility	0.476** (0.199)	0.475** (0.202)	0.471** (0.199)	0.476** (0.200)
Conflict duration	0.029* (0.015)	0.029* (0.015)	0.029* (0.015)	0.029* (0.015)

(continued)

Table 3. (Continued)

Coefficient (robust standard error)	Survival of peace 4 (FIML)	Survival of peace 5 (FIML)	Survival of peace 6 (FIML)	Survival of peace 7 (FIML)
In Conflict cost	-0.003 (0.040)	-0.0002 (0.040)	-0.002 (0.040)	-0.0001 (0.040)
Democracy	0.024* (0.014)	0.024* (0.014)	0.024* (0.014)	0.024* (0.014)
Democracy squared	-0.007** (0.003)	-0.007** (0.003)	-0.007** (0.003)	-0.007** (0.003)
Multilateral peace	-0.233 (0.268)	-0.244 (0.271)	-0.228 (0.268)	-0.242 (0.270)
Constant	-1.168*** (0.342)	-1.187*** (0.342)	-1.170*** (0.340)	-1.174*** (0.344)
ρ (Duration dependence)	0.410***	0.410***	0.410***	0.409***
ρ (Error correlation)	0.250***	0.250***	0.250***	0.250***
N Uncensored	2252 (355)	2252 (355)	2252 (355)	2252 (355)
Log pseudo-likelihood	-1282.094	-1281.439	-1282.106	-1281.078
Wald	206.32***	206.85***	206.32***	206.99***

Note: Robust standard errors cluster on armed conflict episode. *** $p \leq 0.01$; ** $p \leq 0.05$; * $p \leq 0.10$.

incompatibility and somewhat long duration of the armed conflict episode are factors that hasten the recurrence of intrastate armed conflict. Still, chances of peace failure are very small following military victories and peace agreements. Consolidated democracies and consolidated autocracies have lower risks of renewed armed conflict than anocracies.

I carried out a number of alternative specifications and statistical tests. I re-estimated the models without potential outliers.²⁰ Apart from improving the overall model fit slightly, eliminating potential outliers did not alter the results in any important way. I also examined alternative measures of several variables, such as political regime and conflict cost, but no significant change was found.

Marginal effects of improvements in design quality

Because the model has several binary regressors, it is not particularly meaningful to calculate marginal effects at sample means. Therefore, I calculate marginal effects at a representative index case. The index case I have chosen is the ongoing bilateral armed conflict between the Ethiopian government and Oromo Liberation Front over the independence of the Oromiya region. By 2010, the current episode of fighting (which is the second since the beginning of armed struggle in 1977) had lasted 12 years and had caused 6000 battle deaths, with no resolution in sight. Ethiopia as of 2010 is an anocracy (Polity score = 1). Figure 1 displays the predicted effect of improvements in the design quality of a hypothetical agreement on the risk of peace failure.

It is evident that improvements in the design quality of the peace agreement prolong peace. The average peace agreement reduces the risk of armed conflict recurrence considerably. A strong peace agreement that addresses the security, economic, legal and political

Table 4. Peace agreement vs military victory

Coefficient (robust standard error)	Survival of peace 8	Survival of peace 9	Survival of peace 10
Selection			
Territorial incompatibility	-0.205*** (0.061)	-0.196*** (0.062)	-0.195*** (0.062)
Conflict duration	-0.018*** (0.004)	-0.018*** (0.004)	-0.018*** (0.004)
In Conflict cost	-0.099*** (0.015)	-0.099*** (0.015)	-0.099*** (0.015)
Cold War	-0.288*** (0.066)	-0.294*** (0.066)	-0.294*** (0.066)
Democracy	-0.028*** (0.005)	-0.028*** (0.005)	-0.028*** (0.005)
Multilateral armed conflict	-0.366*** (0.067)	-0.358*** (0.067)	-0.358*** (0.067)
Constant	0.672*** (0.132)	0.664*** (0.132)	0.664*** (0.132)
Duration (Objective index)			
Weak (<8)		0.241 (0.817)	
Moderately weak (9–10)		0.370 (0.789)	
Middling (11–13)		0.372 (0.611)	
Moderately strong (14–16)		-0.167 (0.852)	
Ideal (17–18)		-17.179*** (0.430)	
(Composite scale)			
Weak (<5.99)			0.267 (0.813)
Moderately weak (6–8.74)			0.330 (0.808)
Middling (8.75–11.49)			0.273 (0.615)
Moderately strong (11.5–13.49)			0.129 (0.843)
Ideal (13.5–15.36)			-15.253*** (0.404)
Peace agreement	0.164 (0.432)		
Ceasefire agreement	1.508*** (0.397)	1.502*** (0.398)	1.500*** (0.398)
Indecisive outcome	1.565*** (0.316)	1.560*** (0.316)	1.557*** (0.316)
Territorial incompatibility	0.464*** (0.195)	0.471** (0.202)	0.467** (0.200)
Conflict duration	0.028* (0.015)	0.029* (0.015)	0.029* (0.015)
In Conflict cost	-0.001 (0.039)	-0.0003 (0.040)	-0.0001 (0.040)

(continued)

Table 4. (Continued)

Coefficient (robust standard error)	Survival of peace 8	Survival of peace 9	Survival of peace 10
Democracy	0.023* (0.014)	0.024* (0.014)	0.024* (0.014)
Democracy squared	-0.007** (0.003)	-0.007** (0.003)	-0.007** (0.003)
Multilateral peace	-0.289 (0.268)	-0.247 (0.271)	-0.242 (0.270)
Constant	-2.715*** (0.385)	-2.736*** (0.386)	-2.731*** (0.387)
ρ (Duration dependence)	0.408***	0.410***	0.409***
ρ (Error correlation)	0.250***	0.250***	0.250***
N Uncensored	2255 (358)	2252 (355)	2252 (355)
Log pseudo-likelihood	-1291.323	-1281.224	-1281.078
Wald	207.58***	206.83***	206.99***

Note: Robust standard errors cluster on armed conflict episode. *** $p \leq 0.01$; ** $p \leq 0.05$; * $p \leq 0.10$.

disarray in the Oromiya region could deliver a virtually permanent peace. The analysis also shows that a military victory is equivalent to a 12-prototypical provision agreement in its negative marginal effect on the risk of peace failure.

It is clear from the marginal effect analysis that the disparity between weak and strong peace agreements is remarkable. This disparity can be illustrated by a comparison between the Power Sharing Agreement between the Kurdish Democratic Party and Saddam Hussein's Baath Government of Iraq in 1970 and the Bougainville Peace Agreement between the Papua New Guinean Government and the Baluchistan Republican Army in 2001. The goal of the Agreement in Iraq was to give the Iraqi Kurdish people partial self-rule and a larger influence in the central government, thereby alleviating the distributional and governance impediments to cooperation between the two sides. Although the agreement contained important security, political, economic and constitutional reform provisions, it did not contain any of the procedural provisions required for a successful transformation of conflict. For example, the agreement did not specify monitoring and verification mechanisms, dispute resolution mechanisms or reconciliation mechanisms. As a result, the implementation and management problems were severe in the post-conflict environment. The coalition that was put in place by the agreement disintegrated before its three-year anniversary. Attempts to resuscitate the peace failed, and the armed conflict resumed a few months later.

In comparison, the Bougainville Agreement terminated a serious conflict in the South Pacific region. The conflict was born out of the economic frustrations of Bougainvilleans, and mobilized by their sense of cultural distinction. However, the peace agreement did not solely attend to the demand for autonomous Bougainville and the commitment problem accompanying it. Rather, the agreement approach to overcoming impediments to cooperation was wide-ranging. The agreement was particularly outstanding in addressing the implementation and administrative barriers that were facing the parties. In addition to the political status of Bougainville, the agreement tackled the management of natural resources,

Table 5. Individual significance of design dimensions

Coefficient (robust standard error)	Survival of peace 11	Survival of peace 12	Survival of peace 13	Survival of peace 14	Survival of peace 15
Selection					
Territorial incompatibility	-0.196*** (0.062)	-0.197*** (0.062)	-0.198*** (0.062)	-0.195*** (0.061)	-0.195*** (0.061)
Conflict duration	-0.018*** (0.004)	-0.018*** (0.004)	-0.018*** (0.004)	-0.019*** (0.004)	-0.019*** (0.004)
In Conflict cost	-0.099*** (0.015)	-0.099*** (0.015)	-0.099*** (0.015)	-0.099*** (0.015)	-0.099*** (0.015)
Cold War	-0.293*** (0.066)	-0.295*** (0.066)	-0.295*** (0.066)	-0.293*** (0.066)	-0.292*** (0.066)
Democracy	-0.028*** (0.005)	-0.028*** (0.005)	-0.028*** (0.005)	-0.028*** (0.005)	-0.028*** (0.005)
Multilateral armed conflict	-0.359*** (0.067)	-0.357*** (0.067)	-0.359*** (0.067)	-0.357*** (0.067)	-0.358*** (0.067)
Constant	0.694*** (0.132)	0.666*** (0.132)	0.665*** (0.132)	0.666*** (0.132)	0.666*** (0.132)
Duration					
F1: Social consolidation	-0.367*** (0.108)				
F2: Rebuilding of trust		-0.626*** (0.236)			
F3: Prevention of violence resumption			-0.947*** (0.301)	-0.739*** (0.185)	
F4: Redrawing of perimeters of interaction					
F5: Dealing with urgent concerns					
Ceasefire agreement	-0.028 (0.248)	0.037 (0.246)	-0.034 (0.248)	-0.051 (0.248)	-1.088*** (0.281)
Military victory	-1.516*** (0.315)	-1.478*** (0.316)	-1.535*** (0.315)	-1.541*** (0.315)	0.069 (0.251)
Territorial incompatibility	0.496*** (0.198)	0.457*** (0.199)	0.487*** (0.199)	0.471*** (0.199)	-1.450*** (0.315)
					0.472*** (0.196)

(continued)

Table 5. (Continued)

Coefficient (robust standard error)	Survival of peace 11	Survival of peace 12	Survival of peace 13	Survival of peace 14	Survival of peace 15
Conflict duration	0.029* (0.015)	0.028* (0.015)	0.029* (0.015)	0.030** (0.015)	0.028* (0.015)
In Conflict cost	-0.004 (0.040)	-0.009 (0.040)	0.0004 (0.040)	-0.001 (0.040)	0.001 (0.040)
Democracy	0.024* (0.014)	0.018 (0.013)	0.023* (0.014)	0.024* (0.014)	0.016 (0.014)
Democracy squared	-0.006** (0.003)	-0.006** (0.003)	-0.007** (0.003)	-0.007** (0.003)	-0.006* (0.003)
Multilateral peace	-0.238 (0.267)	-0.415 (0.282)	-0.200 (0.268)	-0.252 (0.269)	-0.243 (0.269)
Constant	-1.215*** (0.344)	-1.203*** (0.340)	-1.213*** (0.338)	-1.186*** (0.342)	-1.344*** (0.342)
ρ (Duration dependence)	0.409***	0.406***	0.411***	0.410***	0.409***
ρ (Error correlation)	0.250***	0.250***	0.250***	0.250***	0.250***
N Uncensored	2252 (355)	2252 (355)	2252 (355)	2252 (355)	2252 (355)
Log pseudo-likelihood	-1284.867	-1288.115	-1281.051	-1282.092	-1288.718
Wald	206.16***	206.17***	206.63***	206.98***	207.51***

Note: Robust standard errors cluster on armed conflict episode. *** $p \leq 0.01$; ** $p \leq 0.05$; * $p \leq 0.10$.

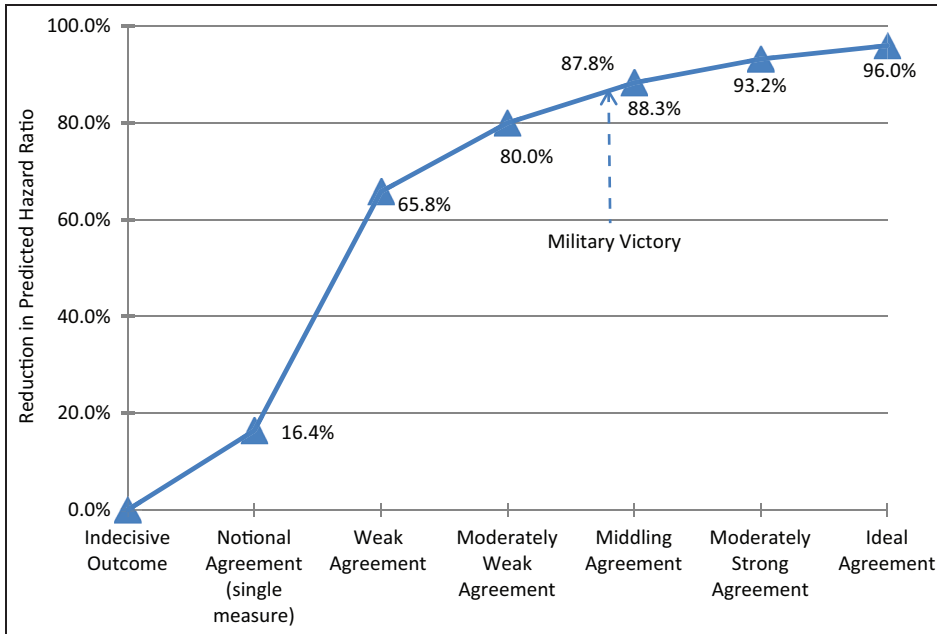


Figure 1. The marginal effect of improvements in the design quality on the predicted hazard ratio.

the protection of human rights, the rebuilding of damaged infrastructure, disarmament, reintegration and rehabilitation of ex-combatants, and the constitutional arrangements for Bougainville. Moreover, the agreement was procedurally ideal, for it contained all nine prototypical procedural provisions. The comprehensive approach of the agreement to dealing with impediments to cooperation has helped maintain the peace in Papua New Guinea until today.

Comparative time at risk analysis of termination types

Since the termination type covariates are qualitative in nature, I use the Nelson (1972) and Aalen (1978) nonparametric estimator to compare the cumulative hazard functions for termination types. As Figure 2 shows, the cumulative hazards for ceasefire agreements and indecisive outcomes increase dramatically in the first five years of the peace episode at a rate of more than one failure every two years. While the ogives (i.e. the curves of cumulative frequency distribution) are a plateau for peace agreements and military victories on the intervals after 20 years of peace, the two termination types follow different paths to this seemingly permanent break in the sequence of the hazard rate. The peace agreement ogive rises a little steeper on the interval with the short duration of peace and reaches the plateau exceptionally early, roughly during the first four years. Comparatively, the military victory ogive rises much more gradually on the first 20-year interval.

This comparison suggests that the critical period following a peace agreement ends by the fourth year of peace,²¹ whereas the critical period following a military victory spans 20 years. Stable peace is achieved much more rapidly after peace agreements than after any

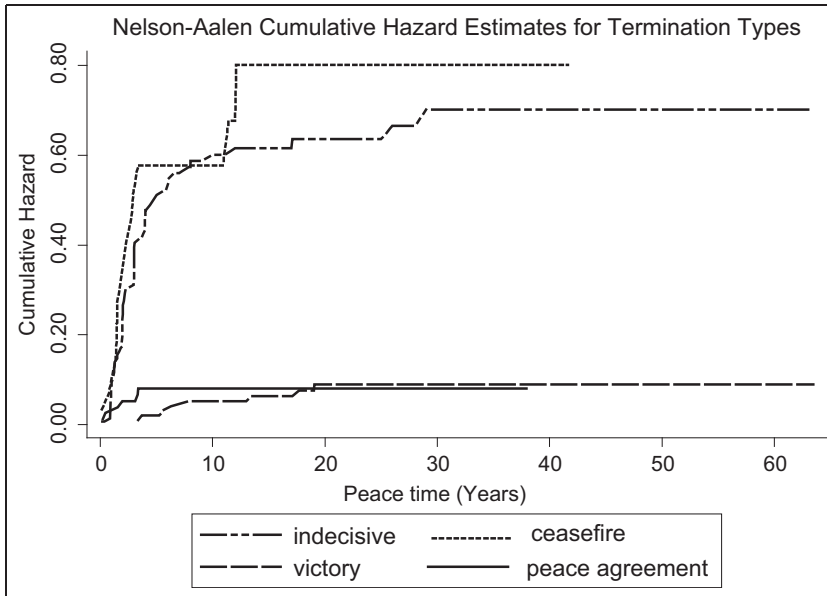


Figure 2. Nelson–Aalen cumulative hazard estimates for termination types.

other type of termination. If the peace agreement is complied with in the first four years, peace is likely to become permanent. However, peace failure is likely at any time during the first two decades following a military victory. This finding connotes that the transformative quality of the peace agreement is superior to that of the military victory and any other type of termination. Peace agreements are simply more efficient.

Conclusions

Contracting for peace is a political phenomenon whose influence has been undervalued. My analysis shows that how well peace is made determines how long it will last. What my different models show quite clearly is that peace agreements reduce the risk of renewed armed conflict. The resilience of the functional proposition to numerous specifications and tests provides compelling support for the view that peace agreements are an essential component of durable peace. Furthermore, well-designed peace agreements give cooperative interaction a better chance at becoming stable and permanent. The peace agreement is a reliable approach to gaining control of future interactions and eliminating sources of relapse into violent conflict.

My research demonstrates that negotiated settlements should not be treated as a monolith. A very strongly designed peace agreement is more enduring than any other conflict outcome. My results also indicate that conflict characteristics and the interaction environment are not absolutely deterministic where the stability of peace is concerned. The analysis of the cumulative hazard curves exposes the dissimilarity in how termination types affect the failure rate over time. The results point to the need to refine the conception that peace is more stable after military victories than after negotiated settlements. Peace agreements are the most efficient instrument to accelerate stability and reduce the risk of armed conflict recurrence.

I have attempted to deduce from historical cases the rules of thumb for future practice. This study offers at least three recommendations on how these efforts may be focused to achieve greater success. While the specifics of peace-making and peace-building programs have to be tailored to the social, cultural, political and economic contours of the war-torn society, the basic framework for sustaining peace remains the same across all cases: efforts must be directed toward engineering a strong peace agreement. Second, young peace is fragile. The peace agreement is not the endgame. It is the first move in the conflict-transformation process. Efforts in the post-agreement phase have to be as sound in setup and execution as in the pre-agreement phase. Peace maintenance efforts have to be sustained for at least the first four years of compliance. The analysis suggests that at least one final lesson can be drawn from past experiences. The more dimensions of interaction that the agreement institutionalizes, the better the chances of a lasting peace. Addressing the political, social, cultural, economic and legal foundations of interaction in the peace agreement eradicates sources of noncompliance and, in consequence, improves the sustainability of cooperation. Furthermore, problems of cooperation must receive balanced consideration. Addressing administrative difficulties and coordination deficiencies common to the post-conflict regulatory environment is not less important than reducing the sense of threat perceived by the parties.

A multitude of peace processes are taking place around the world today, each with its own virtues and flaws. For example, the Sudanese government reached a draft peace agreement with Darfur's Liberation and Justice Movement on 1 June 2011, after three months of negotiations. The draft agreement contains a number of important measures for peace in the Darfur region, including the administrative status of Darfur, the political share of the Darfur people in the Khartoum government, and the return of refugees. Although these measures constitute progress on important fronts, the agreement lacks the depth required for a successful transformation of conflict. For example, the agreement does not contain security arrangements, measures for economic recovery in the Darfur region or reconciliation measures. The lack of independent monitoring and compliance verification mechanisms is more damaging. Without addressing these important issues, the current agreement is destined to have the same fate as the agreements of April 2004, May 2006 and October 2007.

Attempts to achieve peace in Somalia date back to 1991. Since then, more than 19 reconciliation conferences have been held between the government and the Somali factions, the last of which was held in June 2011. The reconciliation attempts succeeded in August 2004 in establishing the Transitional Federal Government of Somalia. However, the new political body has been plagued by crises ever since. There have been three major deficiencies in the previous peace plans: first, they lacked proper implementation plans; second, none contained the necessary monitoring mechanisms; and third, none addressed the economic and humanitarian crises in the country. The distribution of political power has dominated the agenda of previous conferences. Without addressing all social, economic and constitutional issues, and utilizing the required procedural mechanisms, Somalia will continue to teeter on the brink of a full-scale collapse.

The ultimate goal of this study has been to enhance our understanding of the truth of peace agreements. The findings of this study warrant optimism. Mechanisms devised by the would-be peace partners can and do help the maintenance of peace.

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Notes

1. Note here that full and ceaseless implementation is not a component of success. That is because the peace agreement spurs an interaction transformation process that may persist even after the agreement itself (or part of it) is forsaken. However, some implementation is necessary to trigger the interaction transformation process. Agreements that are abandoned before they are publicly ratified are excluded from my analysis. For example, the Juba Peace Agreement of 2008 between the Museveni Government of Uganda and the Lord's Resistance Army (led by Joseph Kony) is not included in my analysis because, after several unjustified delays, Kony refused to formally sign the peace treaty.
2. The governance problem refers to the situation where political institutions are insufficiently rooted in and supported by the society.
3. Management problems refer to administrative difficulties and coordination deficiencies common to the post-conflict regulatory environment.
4. Illustrations of these provisions are provided in Online Appendix 1, available at: <http://www2.binghamton.edu/igcs/faculty-and-staff/rbadran.html>
5. For details on the factor analysis, see Online Appendix 2.
6. For the entire set of criteria, see Gleditsch et al. (2002).
7. In particular, there is a paucity of reliable information about a number of low-intensity conflict episodes that occurred in earlier decades or in least developed countries.
8. Significant de-escalation is measured as a reduction in the intensity of military activity to fewer than 25 battle-related deaths in a year.
9. Operationally, I use the purpose that the parties state in the agreement as a criterion to distinguish a ceasefire agreement from a peace agreement.
10. An example of this is the cessation of fighting under external pressure.
11. The peace episode in this case does not begin until the final act in the series of interrelated partial agreements is signed.
12. There are not enough Cold War incidents to justify the proposition that the two superpowers encouraged intrastate parties to renege on negotiated settlements they signed. Therefore, I do not include this control variable in the duration part of the model.
13. In this situation, values of the observed sample of peace spells for uncensored observations are not representative of the population of cases. The presence of self-selectivity poses a threat to the validity of inferences.
14. The value of Akaike's Information Criterion for the parametric Weibull is much lower than it is for an alternative semi-parametric Cox, 697 and 1068 respectively, which indicates that Weibull performs much better. An alternative Cox model, nonetheless, produces similar results (see Online Appendix 3).
15. Multicollinearity was not strong among independent variables according to a tolerance test and the correlation matrix. Interestingly, the design quality measures are not strongly associated with any of the conflict characteristic variables in the duration part of the model.
16. Note that the agreement dummy variable and the design quality variable are measurements of the same concept and can only be used in the model as substitutes of each other.
17. These results hold when the statistical effects of the peace agreement and its design quality are estimated on the subsample of armed conflicts with at least 1000 battle deaths. For details, see Online Appendix 4.
18. This result holds when military victory is further disintegrated into government victory and rebel victory and either subtype is omitted. For details, see Online Appendix 5.

19. The impact of self-selectivity on the estimates is elaborated in Online Appendix 6. One technical limitation of the Boehmke et al. estimator is the restriction $|\rho| \leq 0.25$. The true error correlation might be higher than 0.25. However, Monte Carlo analysis shows that, even when the true values of error correlation are outside the permitted range, the estimates produced by the FIML model are closer to the true values than the estimates produced by a naive duration model (Boehmke et al., 2006: 198).
20. The peace episode between South Vietnam and the National Liberation Front has lasted nearly twice as long as predicted. Results without this potential outlier are reported in the Online Appendix 7.
21. Mason et al. (2011: 185) reach a similar conclusion about the high fragility of peace in the first few years following a negotiated settlement and the decline of this fragility as peace endures.

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