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Bargaining, Nuclear Proliferation, and Interstate Disputes (2009)

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Introduction

The authors begin by exploring two common arguments about the effect of nuclear proliferation on conflict.

- Optimists argue that nuclear weapons act as deterrents, and therefore decrease the likelihood of conflict.
- Pessimists argue that nuclear weapons can encourage aggressive strategies and increase the likelihood of accidents, increasing the likelihood of conflict.

The authors then propose a third theory which combines the optimistic and pessimistic theories, suggesting that nuclear weapons should not increase or decrease the likelihood of conflict.

They form hypotheses using each of the three theories.

Hypotheses 1-3

- *Hypothesis 1*: States with nuclear weapons are less likely that nonnuclear states to be targets of conventional disputes. (Optimistic)
- *Hypothesis 2*: States with nuclear weapons are more likely than nonnuclear states to initiate conventional disputes. (Pessimistic)
- *Hypothesis 3*: States with nuclear weapons are about as likely as nonnuclear states to initiate or be the targets of conventional disputes. (Hybrid)

Hypotheses 4-6

The authors also explore potential effects of nuclear proliferation on influence and negotiated settlements.

Hypothesis 4: States with nuclear weapons are more likely to receive diplomatic missions from other states than states without nuclear weapons.

Hypothesis 5: States with nuclear weapons are likely to receive higher level diplomatic missions from other states than states without nuclear weapons.

Hypothesis 6: States with nuclear weapons are more likely to obtain preferred policies peacefully.

Research Design

"Proliferation might effect or reflect power relations or patterns of interstate dispute behavior. The result would be to bias the size or significance of key coefficients" (217)

The authors use a previously developed instrument (2007) to attempt to remove some of this potential bias, which considers determinants of nuclear proliferation including capacity, state interest, and institutions.

How do the authors operationalize the variables in their hypotheses?

- Conflict: Militarized Interstate Disputes (COW MID Data Set)
- Influence I: Diplomatic Recognition (COW Diplomatic Exchange Data Set)
- Influence II: Settlement Attempts (Issue Correlates of War)

Conflict

- Having nuclear weapons increases the chance of initiating a MID
- However, nuclear weapons themselves do not have much of an impact on the initiation of MID's
- Rather, capable states (CINC), states with security problems, or states with international interests are more likely to initiate MID's *and* proliferate

Table 1
The Effect of Nuclear Weapons on MID Initiation
(probit, directed dyads, 1945-2000)

	Exogenous Model		Endogenous Model	
D.V.: MID Initiation	Coefficient	(*SE*)	Coefficient	(*SE*)
Nuclear Weapons A	0.260***	(0.070)	–0.003	(0.234)
Nuclear Weapons B	–0.001	(0.077)	–0.033	(0.239)
Nuke A × Nuke B	–0.212	(0.135)	–0.255	(0.498)
Rivalry Status A	0.293***	(0.032)	0.285***	(0.031)
Rivalry Status B	0.157***	(0.030)	0.157***	(0.030)
Dyadic Rivalry	1.113***	(0.051)	1.122***	(0.038)
CINC A	0.778	(0.707)	2.353	(1.474)
CINC B	1.589†	(0.829)	1.782	(1.518)
CINC A × CINC B	0.207	(15.833)	–1.536	(20.308)
Democracy A	0.023***	(0.006)	0.025***	(0.006)
Democracy B	0.041***	(0.006)	0.041***	(0.005)
Dem. A × Dem. B	–0.005***	(0.001)	–0.005***	(0.001)
Contiguity	–0.137**	(0.044)	–0.139***	(0.022)
Distance (ln)	–0.050†	(0.026)	–0.047***	(0.013)
Alliance	0.043	(0.040)	0.046	(0.033)
Intercept	–2.308***	(0.081)	–2.297***	(0.061)
N	1,051,218		1,016,102	
Log likelihood	–6008.249		–5823.235	
$\chi^2_{(19)}$	6942.134		8643.780	

Note: Spline coefficients and *SE*s suppressed. CINC = Composite Index of National Capability; D.V. = dependent variable; MID = Militarized Interstate Dispute; *SE* = standard error.
† = 10%. ** = 1%. *** = 0.1%.

Recognition

- States with nuclear weapons are more likely to be recognized by other nations
- States with nuclear weapons are more likely to recognize other nations as well

Table 2
Nuclear Weapons and Diplomatic Recognition
(probit, directed dyads, 1945-2000)

D.V.: Diplomatic Recognition (State B recognizes State A)	Dichotomous		Ordinal	
	Coefficient	(*SE*)	Coefficient	(*SE*)
Nuclear Weapons A	0.168***	(0.033)	0.232***	(0.028)
Nuclear Weapons B	0.116***	(0.033)	0.252***	(0.029)
Nuke A × Nuke B	–0.241	(0.186)	0.071	(0.155)
Rivalry Status A	0.250***	(0.010)	0.139***	(0.009)
Rivalry Status B	0.260***	(0.010)	0.137***	(0.009)
Dyadic Rivalry	–0.757***	(0.073)	–0.564***	(0.055)
CINC A	9.566***	(0.485)	5.432***	(0.354)
CINC B	12.311***	(0.542)	6.471***	(0.386)
CINC A × CINC B	9.173	(63.830)	–96.018***	(16.082)
Democracy A	0.035***	(0.002)	0.008***	(0.002)
Democracy B	0.043***	(0.002)	0.011***	(0.002)
Dem. A × Dem. B	0.002***	(0.000)	0.002***	(0.000)
Contiguity	–0.196***	(0.050)	–0.396***	(0.041)
Distance (ln)	–0.200***	(0.007)	–0.158***	(0.005)
Alliance	0.652***	(0.021)	0.146***	(0.016)
Lagged D.V.			0.780***	(0.003)
Intercept	0.830***	(0.057)		
_cut1			0.467***	(0.044)
_cut2			0.573***	(0.044)
_cut3			0.575***	(0.044)
N	213,454		187,394	
Log likelihood	–79093.293		–64753.548	
$\chi^2_{(19,16)}$	44041.069		69850.369	

Note: Spline coefficients and *SE*s suppressed. CINC = Composite Index of National Capability; D.V. = dependent variable; *SE* = standard error.
*** = 0.1%.

Settlements

- States with nuclear weapons are no more or less likely than other states to initiate settlements regarding ICOW issues
- However, states with nuclear weapons are more likely to be the recipients of settlement attempts than nonnuclear states
- The same is true for strictly peaceful settlement attempts

Table 3
Nuclear Weapons and ICOW Settlement Attempt
(probit, directed dyads, 1945-2000)

D.V.: ICOW Settlement (State A targets State B)	Settlement Attempt		Peaceful Attempt	
	Coefficient	(*SE*)	Coefficient	(*SE*)
Nuclear Weapons A	0.090	(0.212)	0.108	(0.156)
Nuclear Weapons B	–0.602***	(0.189)	0.550***	(0.116)
Salience to Challenger			–0.080	(0.058)
Salience to Target			0.127†	(0.076)
Rivalry Status A	0.216	(0.132)	–0.115	(0.087)
Rivalry Status B	0.046	(0.120)	–0.071	(0.085)
Dyadic Rivalry	–0.607***	(0.158)	0.250*	(0.115)
CINC A	–2.936†	(1.568)	0.357	(1.486)
CINC B	3.335	(2.388)	–1.295	(1.692)
CINC A × CINC B	–115.467	(223.152)	127.719	(183.545)
Democracy A	–0.016	(0.027)	0.022	(0.023)
Democracy B	–0.032	(0.020)	0.030	(0.019)
Dem. A × Dem. B	0.000	(0.003)	–0.001	(0.003)
Contiguity	0.396*	(0.188)	–0.287**	(0.109)
Distance (ln)	0.058**	(0.021)	–0.050***	(0.013)
Alliance	–0.069	(0.119)	0.077	(0.079)
Intercept	0.875**	(0.285)	–0.545*	(0.225)
N	3,233		3,233	
Log likelihood	–1502.776		–1248.575	
$\chi^2_{(14,20)}$	66.823		537.608	

Note: Significance levels: Spline coefficients and *SE*s suppressed. CINC = Composite Index of National Capability; D.V. = dependent variable; ICOW = Issue Correlates of War; *SE* = standard error.
† = 10%, * = 5%, ** = 1%, *** = 0.1%.

Resolutions

- Nuclear states acting as challengers are not more likely to pursue a peaceful settlement with their target than nonnuclear states.
- Opponents of nuclear states are more willing to make concessions than opponents of nonnuclear states.

Table 4
Nuclear Weapons and ICOW Resolution (probit, directed dyads, 1945-2000)

D.V.: ICOW Resolution (State A targets State B)	Challenger Concedes		Target Concedes	
	Coefficient	(*SE*)	Coefficient	(*SE*)
Nuclear Weapons A	–0.026	(0.316)	2.054**	(0.652)
Nuclear Weapons B	0.745**	(0.274)	0.622	(0.616)
Rivalry Status A	0.043	(0.241)	–4.807***	(0.373)
Rivalry Status B	0.344	(0.257)		
Dyadic Rivalry	–0.085	(0.272)	5.430	(0.000)
CINC A	4.542	(3.045)	–71.536**	(24.844)
CINC B	–3.541	(3.388)	–38.485	(46.400)
CINC A × CINC B	–1794.496†	(1089.284)	–25178.662	(41311.316)
Democracy A	0.095*	(0.044)	0.406	(0.268)
Democracy B	0.090†	(0.052)	0.508*	(0.240)
Dem. A × Dem. B	–0.023***	(0.006)	–0.047†	(0.028)
Contiguity	–6.058***	(1.235)		
Distance (ln)	–0.812***	(0.158)		
Alliance	–0.346†	(0.201)	–0.102	(0.400)
Intercept	3.349**	(1.233)	–7.018**	(2.460)
N	3,233		3,233	
Log likelihood	–152.776		–32.888	
$\chi^2_{(14,20)}$	70.355			

Note: Spline coefficients and (*SE*s) suppressed. CINC = Composite Index of National Capability; D.V. = dependent variable; ICOW = Issue Correlates of War; *SE* = standard error.
† = 10%. * = 5%. ** = 1%. *** = 0.1%.

Big Ideas

Nuclear weapons themselves may not have a significant impact on the likelihood of conflict.

However, nuclear weapons likely play an important role when it comes to bargaining, international recognition, and the peaceful settlement of issues.

Therefore, proliferation may not be appealing to all states.

- Friendly Neighbors vs. Not-so-Friendly Neighbors
- Large Budget vs. Small Budget
- Heavily Involved in International Affairs vs. Not Very Involved

Criticisms

- Is there a better way to operationalize levels of conflict than considering MID's? Is it possible that nuclear weapons have a significant impact only on a certain type of conflict (very destructive, long-lasting wars, for example)?
- In their instrument described in the appendix of the article, the authors omit a significant number of potential determinants of proliferation for a variety of reasons. Are these omissions reasonable?

Table 5
Nuclear Weapons Status (probit, country–years, 1945-2000)

D.V.: Nuclear Status	Coefficient	(*SE*)
Latent National Capacity	0.525**	(0.181)
Energy Cons. Per Cap.	0.041*	(0.018)
Democracy	0.084*	(0.040)
CINC	24.110***	(4.312)
Rivalry Status	1.113**	(0.400)
Nuclear Rival	–0.030	(0.429)
Rival has Nuclear Ally	–0.295	(0.386)
Intercept	–6.736***	(1.187)
N	7,723	
Log likelihood	–484.3	
	85.424	

Note: CINC = Composite Index of National Capability; *SE* = standard error.
* = 5%. ** = 1%. *** = 0.5%.