Domestic Audiences and Interstate Conflict: Bargaining the in the Shadow of Mass Mediated Publics

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ABSTRACT

Much of the contemporary literature on interstate conflict highlights the importance of signaling processes between potential and actual adversaries. The assumption frequently made in such work is that so-called "audience costs" allow leaders to more credibly signal their intentions by heightening the stakes leaders face in diverging from their stated positions. However, this mechanism assumes the presence of a particular kind of collective audience: a mass audience capable of jointly receiving messages and capable of generating coordinated responses to such messages. I argue that such mass mediated publics are not naturally occurring characteristics of the interstate system, but rather are constituted by particular domestic communicative structures. Moreover, those structures are not constants, but instead vary considerably over time and space. Using cross-national time-series data for the period 1945-1998, I demonstrate that the constraints produced by differing levels of *media freedom* and *media density* lead to significant differences in interstate conflict behavior, including the likelihood of dispute initiation and reciprocation. I further show that the "democratic peace" effect is actually conditional on domestic communicative structures, operating only in the presence of sufficiently *free* and sufficiently *dense* mass media networks.

I. Introduction

Much of the contemporary literature on interstate conflict highlights the importance of signaling processes between potential and actual adversaries. It has become commonplace to assume that the credibility of such signals will be a function of the domestic "audience costs" faced by regime leaders. Such costs are thought to heighten the transparency with which states can communicate their resolve, by heightening the stakes leaders face when their behavior diverges from their rhetoric. However, I will argue that this mechanism implicitly incorporates several assumptions which deserve closer scrutiny. It has already been widely noted that the audience cost mechanism requires the presence of institutions that generate sanctions of some sort (frequently removal from office) on state leaders in response to the demands of a domestic audience. This insight has become the basis for a substantial branch of the democratic peace literature, which claims that the observed infrequency of militarized conflicts between democracies is the result of the signaling advantages created by competitive electoral institutions.

The argument presented here is that this insight, while important, fails to capture the full extent of the requirements underlying the audience cost mechanism. Democratic institutions certainly enhance the strength of the connection between audience pressures and leadership behavior, but the audience cost mechanism also requires the presence of an audience in the first place. Moreover, it requires the presence of a particular kind of audience: (a) one that has *influence* over state leaders, (b) one that has *access* to information regardless of whether it favors the ruling regime, and (c) one that is *unified* by densely interconnected experiences and thus capable of coordinated action. Drawing on a theoretical approach which I have termed *communicative structuralism* (Warren 2008a; Warren 2008b), I argue that such collective

audiences are not naturally or inevitably occurring characteristics of the interstate system, but rather are *constituted* by particular domestic communicative structures. Such structures exercise their effects by systematically constraining the distribution of opportunities for message transmission and reception in a given society. Moreover, because these structures vary both across time and across space, communicative structuralism allows us to investigate more thoroughly the mechanisms that underlie the relationship between domestic audiences and interstate conflict.

After describing this approach and deriving several hypotheses concerning the relationship between mass media structures and interstate conflict, I test the implications using newly collected data on mass media structures in 177 countries and conflict data from the Militarized Interstate Dispute dataset, for the period 1945-1998. I demonstrate that the constraints and opportunities produced by different mass media structures influence both the initiation and reciprocation of interstate conflicts. I also demonstrate that these findings are robust to concerns about selection bias, using both a seemingly unrelated bivariate probit model and a selection model that avoids the need for theoretically questionable exclusion restrictions. Further, I show that the oft-noted "democratic peace effect" is actually conditional on domestic communicative structures. Jointly democratic dyads are more peaceful only in the presence of domestic audiences constituted by sufficiently *dense* and sufficiently *free* mass media networks. The implication is that while electoral institutions are a important part of the mechanism linking collective audiences to interstate peace, they are only one component of the broader "communicative peace" that operates between contemporary states.

II. Audience Costs

First formulated by Fearon (1994) in a model of interstate bargaining, the concept of "audience costs" has come to be utilized in a wide variety of contexts. The key insight, which can be traced back at least as far as Schelling (1960), is that being constrained by forces that are outside of one's control can actually improve one's bargaining leverage if those constraints make it more costly to defect from one's stated position. In Fearon's model, these constraints take the form of a domestic audience which can be counted on to sanction a leader who makes threats or commitments without fulfilling them. Fearon never offers a firm definition of "audience," but he gives examples which include royal courts, legislative committees, and mass publics following the invention of mass media. He argues that the more constrained a leader was by such domestic audiences, the easier it would be to credibly signal resolve to other states, and thus the less likely it would be for private information to obscure the possibility of a peaceful interstate bargain.

This basic idea has since been expanded into an explanation for the so-called "democratic peace" thesis. The empirical regularity which underlies this literature is well-known: democracies, while not more peaceful in the aggregate, are far less likely to engage in violent conflict with other democracies than they are with authoritarian regimes (Dixon 1994). Jointly democratic dyads are both more peaceful than mixed dyads, and more peaceful than jointly authoritarian dyads. Many early explanations for the democratic peace focused on the purportedly peaceful nature of democratic norms, which were claimed to elevate the liberal values of human rights, the rule of law, and harmonious coexistence (Doyle 1986). This view, however, faces several empirical difficulties. On the one hand, it is difficult to reconcile with the observation that democracies have frequently been willing to engage in all manner of atrocities in their conflicts with other states. It is also does not seem to explain why only jointly

democratic dyads are more peaceful, rather than individual democratic states. For instance, looking at the period 1816 to 1980, Farber and Gowa (1995) find that democracies are no less war prone that other polities, but that wars between democracies occur at significantly lower rates than wars between other pairs of states. They also find that the effect of regime type seems to only be significant in the latter half of the twentieth century, leading them to argue that the democratic peace may just be an artifact of the common security interests amongst democracies created by the Cold War. However, numerous other studies which expanded the temporal domain beyond the Cold War have found continued effects of regime type that are robust to a wide variety of specifications. Maoz (1997), for instance, shows that the democratic peace finding is robust to different measures of democracy, and to controls for alliances, and military preponderance, and Gelpi and Griesdorf (2001) find that controlling for common interests does not diminish the significance of the democratic peace finding.

Recognizing the difficulties with the normative account, but convinced of the veracity of the empirical regularity, many democratic peace theorists turned instead to Fearon's bargaining framework and the implications of varying audience costs. As a result, extensive empirical evidence now exists linking democratic audience costs to variance in conflict behavior (see Eyerman and Hart 1996; Partell and Palmer 1999; Prins 2003). Additional theoretical work has also made progress in more fully specifying the causal mechanisms linking democratic institutions to the production of audience costs. Schultz (1998, 1999) argues that democratic electoral competition, and the resulting presence of opposition parties, make democracies especially effective in signally resolve. As Lipson puts it, democracies have unique "contracting advantages" which arise from the transparency of the regime's decision making process, and which thus allow them to more easily form mutually reinforcing peaceful bargains. These

insights have now also been incorporated into formal models of interstate bargaining, which treat the battlefield as an arena for the credible revelation of private information about state capabilities and resolve (Reed 2003; Powell 2004). Filson and Werner (2004) take this a step further by using a formal model of crisis bargaining, combined with the assumption that democratic audience costs make democracies more sensitive to battlefield losses, to derive and test several novel implications concerning the relationship between regime type and militarized conflict. These implications include that democracies are more likely to be targeted for attacks, that democratic defenders are more likely to win conflicts but will receive lower payoffs for their victories, and that democratic initiators will tend to fight shorter wars with lower costs.

In all of these accounts, the only variable considered relevant to variation in audience costs has been democratic electoral institutions, which create a mechanism linking audience pressures to the interests – and thus the behavior – of state leaders. But this is only half of the equation. For such institutions to be relevant, there must be an audience to create such pressures in the first place. Moreover, to be relevant to the strategic context of interstate bargaining, an audience must be one that is capable of jointly receiving messages even when they contain information that is detrimental to the regime and capable of generating coordinated responses to such messages. The central argument presented here is that such audiences are neither natural nor inevitable features of the interstate system. They are produced and maintained by domestic communicative structures that vary greatly between states. Current approaches treat the presence of an audience as an unproblematic given. The only question is then the degree to which the audience is allowed to influence the leadership of a particular regime. In contrast, communicative structuralism claims that mass audiences are structurally induced entities, that the characteristics of mass audiences are thus variables rather than constants, and that we should

therefore see patterns in interstate conflict behavior that vary systematically with domestic communicative structures.

III. Communicative Structuralism

The theory of communicative structuralism was originally developed to explain the relationship between mass media networks, the construction of symbolic national allegiances, and the emergence of large-scale civil conflict (Warren 2008a; Warren 2008b). This "structural" approach to the analysis of the causal effects of mass communication focuses on the distribution of opportunities for transmission and reception rather than the details of message content. The central claim of this framework is that *public* communicative structures, those which transmit synchronized messages and thus generate joint awareness of those messages amongst a collective audience, are central to the development of generalized loyalties, because they create communities of shared experience and thereby generate symbolic touchstones which allow individuals to feel connected to a seemingly unified moral community.

Public communicative structures – of which the domestic broadcast networks of radio and television are the most prominent examples – make it possible for an audience to gain an awareness of itself as a cohesive collective, because they represent arenas of shared expression in which it becomes possible to construct communities of symbolically shared experience. That is, by "offering the audience an image of itself … as a knowable community" (Morley 1995, 66).[1] Constrained by the principles of synchronized transmission and joint awareness of reception, the medium forces both a generalization of message production and a generalization of message

[1] Chayko refers to this as a "community of the mind" (2002, 60-63). Many have argued for the nationally unifying effects of mass media, including Deutsch (1953), Gellner (1983), Anderson (1991), Schlesinger (1991), Calhoun (1991), and Servaes (1997). On this point, see also Meyrowitz (1985, 1997).

reception. It is this tacit capability to engage in *intersubjective* inferences which lies at the root of nearly all mass coordinated behavior, and hence at the root of the construction of effective collective audiences. Public communicative structures – such as the mass media – *constitute* effective collective audiences as sets of individuals amongst whom this capability obtains. Moreover, because such structures vary both across time and across space, they provide leverage in understanding the causal effects that different kinds of collective audiences have on interstate conflict behavior. While such structures vary along a wide array of dimensions, here we will focus on the two dimensions that are expected to most directly impact the calculations of state leaders in interstate disputes: media *freedom* and media *density*.

Although most investigations of "audience cost" effects have been restricted to variation in electoral institutions, a limited number of studies have also begun to examine the impacts of media freedom on interstate conflict, both through formal modeling (Slantchev 2006) and empirical analysis (Van Belle 1997; Choi & James 2007). In most prior work, the impact of mass media has been characterized as operating primarily through the dissemination of information to the citizenry. Studies of the relationship between mass media and interstate conflict have generally focused on the level of media openness, arguing that greater freedom of information creates more effectively informed citizens who are less easily manipulated by elites and more accurately aware of foreign events. The study of mass communication has thus been seen as being primarily concerned with judging the effects of particular messages on the basis of their content: whether they contain accurate information or biased propaganda, whether they indicate hostility or a desire for cooperation, and so on (e.g. Hunt 1997). However, the theory of communicative structuralism highlights the fact that media freedom not only alters the content of the messages that are transmitted to a given population, but also alters the character of the

collective audience that is thereby formed. When regimes maintain the ability to censor mass media messages, the ability of citizens to make accurate inferences regarding state behavior is tightly constrained. Because it is only through mass media messages that most citizens can learn of foreign events, a free and open media environment is critical to the ability of domestic audiences to sanction their leaders for foreign policy mistakes. Censored environments thus generate collective audiences with "blinders" that allow them to see only a narrow spectrum of foreign events. We can refer to this as the *informational* dimension of domestic communicative structure.

The second key dimension is the *density* of a public communicative structure, which refers the proportion of a given population that has the capability to receive its messages. They are the portion of the population available to be outraged by the latest insult to national pride. They are also the portion of the population with which a leader will have to contend if his foreign policies end in failure. In other words, the density of a mass media structure determines the relative strength with which a given audience will be collectively constituted. Hence, whereas the freedom of domestic communicative structures determines the *vision* of a collective audience, the density of a domestic communicative structure determines its *weight*. It is the combination of these two structural dimensions which produces cross-national variation in the form and strength of domestic collective audiences. From a strategic perspective, media freedom and media density can therefore be seen as double-edged swords: the audience may rally to your successes or protest your failures. It is precisely this quality which adds credibility to threats and promises made in the shadow of mass mediated publics.

None of the foregoing discussion, however, should be taken to imply that the institutional constraints of competitive elections are unimportant to the prosecution of interstate disputes.

Electoral democracy is, in a sense, the most fundamental of the dimensions examined here because it influences the extent to which the regime leadership cares about the reactions of its domestic audience in the first place. Democracy determines the porousness of the regime to audience pressure, whereas communicative structure determines the nature of the audience that exerts pressure on the regime.

The causal relationships implied by this account are summarized by the "Audience Tripod" pictured in Figure 1. As has already been found in previous research, electoral institutions should be expected to reduce the propensity to engage in interstate conflict only when those institutions are shared by both members of a given dyad. The "contracting advantages" hypothesized by the theory of audience costs can only arise when both members of a given dyad are similarly constrained. Tests of such hypotheses have therefore focused, not on the monadic presence of democracy, but on the dyadic presence of "joint democracy." A similar logic can be applied to the hypothesized effects of media freedom and media density, as they too can only generate signaling advantages when they are jointly present in a dyad. As shown in Figure 1, *Joint Democracy*, *Joint Media Freedom*, and *Joint Media Density* are all expected to have independent and negative effects on the likelihood of interstate conflict. Moreover, if the account presented above is accurate, then *Joint Media Freedom* and *Joint Media Density* should condition the effect of *Joint Democracy*, because a regime's porousness to audience pressure matters only if an effectively constituted collective audience exists to exert such pressure. Hence we have the following hypotheses:

H1: *Ceteris paribus, the joint presence of democracy in a given dyad will reduce its propensity to experience interstate militarized disputes.*

H2: *Ceteris paribus, the joint presence of media freedom in a given dyad will reduce its propensity to experience interstate militarized disputes.*

H3: *Ceteris paribus, the joint presence of media density in a given dyad will reduce its propensity to experience interstate militarized disputes.*

H4: *Ceteris paribus, the pacifying effect of joint democracy will be conditioned by the joint presence of media freedom and by the joint presence of media density.*

IV. Empirical Tests

Using a directed-dyad specification, the dependent variable in the tests reported below is the onset of a reciprocated militarized interstate dispute (MID).[2] A MID is defined as a case in which one state directs a threat of force, a show of force, or a use of force against another state. A state is considered to "initiate" a MID if it is the first state in a dyad to threaten, show, or use force. A MID is considered "reciprocated" if the target state also produces a threat of force, a show of force, or a use of force against the initiator. The dependent variable, ***Recip***, thus equals 1 for any dyad-year in which state A initiated a reciprocated MID against state B, and 0 for all other dyad-years.[3]

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[2] Jones, Bremer, and Singer 1996.

[3] This was coded using Maoz's (1999) dyadic MID data, which corrects a variety of errors that occur when the original MID data is converted into dyadic form. Initiation is based on whichever state is coded as the "originator" of the dispute. "Joiner dyads" (i.e. states which join the conflict after its original outbreak) are excluded from the analysis, as they are likely to follow a different decision calculus than states which originally initiated the conflict.

The key independent variables are the three components of the Audience Tripod described above: *Democracy*, *Media Freedom*, and *Media Density*. Each component of the tripod enters the equation three times: once as a monadic value for the initiator, once as a monadic value for the target, and once as a multiplicative interaction term that captures the impact of the joint presence of the factor on both sides of the dyad. ***Democracy*** (i.e. electoral institutions) is measured using the standard 21-point scale derived from the Polity IV data set, and equals 1 for any state has a score of 5 or higher on the autocracy-democracy spectrum.[4] ***Media Freedom*** equals 1 for any country-year in which the mass media were free from observable political censorship, and 0 otherwise.[5] ***Media Density*** is measured as the number of radio receivers or the number of television receivers – whichever is larger – in use for broadcasts to the general public, per 100 people.[6]

A variety of dyadic control variables are also included in the analysis.[7] ***Distance*** is equal to the minimum border to border distance between states for all states within 1,000 miles of each other,[8] and equal to the capital to capital distance between states for all other dyads. ***Major***

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[4] The scale results from subtracting the Polity IV *Autocracy* score from the *Democracy* score.

[5] Coded by the author using the Freedom House Press Freedom Survey (2005) and Van Belle's (1997) press freedom data. The variable equals one when the state is coded in the top category of press freedom in either source. Disagreements between these two sources were resolved by privileging whichever indicator represented a greater level of censorship, as errors of omission (i.e. failing to see censorship which actually exists) were thought to be more likely than errors of commission (i.e. seeing censorship when non actually exists).

[6] Because radio receivers represent earlier and cheaper technology than television, they are more common in nearly all of the country-years under investigation. Television receivers were more dense in less than 2% of the observations. Ideally, this variable would measure the percentage of households with either a radio or a television, as that would more accurately capture the percentage of people who are reachable by popular broadcasts, but such data are not available. The data for this variable are taken from the Banks (2002) Cross-National Times Series database and the World Bank's World Development Indicators database (2004). In the case of disagreements between the two sources, the Banks data was generally prioritized, except for a small number of obvious typos. Missing values were linearly interpolated (but never extrapolated) within a given time series.

[7] Unless otherwise noted, these variables were taken from the Correlates of War dataset, using EUgene software.

[8] Taken from the Gleditsch and Ward (2001) minimum-distance database.

Power equals 1 for any dyad which includes at least one major power, and 0 otherwise. ***Capability Ratio*** is calculated using the standard CINC index, dividing the weaker state's capability score by the stronger state's score. ***Alliance*** equals 1 for any dyad-year in which state A had a formal obligation of defense, offense, neutrality, nonaggression, or consultation towards state B.[9] At the level of individual states, I also control for ***GDP per capita***[10] and total ***Population*** to ensure that the reported media effects are not mere artifacts of economic development or overall size. Finally, as a check against the potential bias produced by duration dependence I also included ***Peace Years***, which measures the number of years since the last MID initiation in a given directed-dyad, along with a natural cubic spline of peace years, as per the recommendations of Beck, Katz, and Tucker (1998). Unless otherwise noted, all of the results reported below are based on logistic regressions using Huber/White robust standard errors adjusted for clustering by country.

Main Results

The main results are reported in Table 1. Model 1 is a baseline specification that includes the control variables along with *Democracy*, intended to capture standard model of the democratic peace. Model 2 adds the media variables – *Freedom* and *Density* – to the baseline specification. Model 3 checks the robustness of the findings by restricting the sample to "politically relevant" dyads that are actually capable of conflictual interactions.[11] The evidence is strongly supportive of Hypotheses 1, 2, and 3. The coefficients on *Joint Democracy*, *Joint*

[9] Coded using the ATOP data from Leeds et al. (2001).

[10] Gleditsch (2001).

[11] Politically relevant dyads are those in which the two states are contiguous or in which at least one state is a major power.

Media Freedom, and *Joint Media Density* are all negative and statistically significant at the $p < 0.05$ level.

To ease interpretation of the coefficients in Model 3, I simulate the probability of the initiation of a reciprocated MID, holding all variables constant at their means while shifting the variable of interest for the initiator, the target, or both. As can be seen in Figures 2, 3, and 4, the results demonstrate that in addition to being statistically significant, all three legs of the Audience Tripod are also quite significant in substantive terms. Shifting from a dyad in which the initiator is 'low' on the *Democracy* scale and the target is 'high' on the *Democracy* scale – which we will label the $(\text{low, high})_{\text{DEM}}$ condition – to a situation in which both the initiator and target are both 'high' on the *Democracy* scale, lowers the probability of conflict from 0.112% to 0.064%. This represents 43% reduction in the probability of conflict. Moreover, the media variables generate even larger substantive effects. An analogous shift in *Media Freedom* from $(\text{low, high})_{\text{MF}}$ to $(\text{high, high})_{\text{MF}}$ reduces the probability of conflict by 80%, while an analogous shift in *Media Density* from $(\text{low, high})_{\text{MD}}$ to $(\text{high, high})_{\text{MD}}$ reduces the probability of conflict by 79%.[12] This is strong evidence that the mass media variables matter as much if not more than electoral institutions, indicating that the broader Audience Tripod is a necessary addition to our understanding of the democratic peace.

The simulations also reveal that while *Democracy*, *Media Freedom*, and *Media Density* operate similarly in their effects on interstate conflict, there are also important differences in their effects, especially when one of the factors is unbalanced in a particular dyad. Although these differences were not directly hypothesized, they tend to match nicely with the theoretical

[12] Because *Media Density* is a continuous variable, it's 'low' and 'high' values must be defined somewhat arbitrarily. In the results reported here, 'low' = 0 to represent a complete absence of mass media and 'high' = 100 to represent complete saturation. Several alternative values were tested, but they do not alter the substantive interpretation of the results.

account described above. First, consider the simulated effects of *Democracy*. Here, the results match the well-known "weak link" effect found in previous studies of the democratic peace. Conflict is reduced under the $(\text{high, high})_{\text{DEM}}$ condition, while the other three conditions produce equally high likelihoods of conflict. This follows the theoretical expectation that electoral institutions can only constrain conflict behavior when they are present on both sides of a dyad. An imbalance in *Democracy* is thus no better and no worse than a joint absence.

Contrast this with the findings for *Media Density*. A large imbalance in *Media Density* produces a dramatic increase in the probability of conflict relative to a joint absence. We can make sense of this finding by recognizing that many MIDs are essentially *performances*, put on to satisfy the desires of a domestic audience. When such audiences are absent on both sides of a dyad, the incentives for both initiation and reciprocation appear to be dramatically reduced.

Contrast this also with the findings for *Media Freedom*. Here, an imbalance also produces a dramatic increase in the probability of conflict. However, whereas this effect was symmetrical for *Media Density* – creating a nearly identical increase conflict propensities in both the $(\text{low, high})_{\text{MD}}$ condition and the $(\text{high, low})_{\text{MD}}$ condition – the effect is strongly asymmetrical for *Media Freedom* with the $(\text{low, high})_{\text{MF}}$ condition producing substantially higher conflict probabilities than any of the other configurations. We can make sense of this finding by remembering that the impacts of media censorship are particularly strong when a dispute ends in failure for the initiating state. When a dispute is successful for either side, they are unlikely to prevent news of their triumphs from reaching the home crowd. On the other hand, when the initiator of a dispute fails to achieve their objectives, media censorship may allow them to suppress negative domestic consequences. The $(\text{low, high})_{\text{MF}}$ configuration is thus particularly dangerous because the suppressive initiating regime can act with a good deal of impunity,

knowing that the target's successes *and* failures will be accurately relayed back the target's domestic audience while its own domestic audience will only every hear of their successes.

Addressing Potential Selection Bias

It is important to note, however, that the nature of the dependent variable utilized here creates strong concerns that selection bias could be impacting the results. Dispute reciprocation, by definition, is only possible after a MID has been initiated. If the process by which MIDs come to be initiated is causally related to the process by which MIDs come to be reciprocated, then the equations attempting to predict these outcomes may have correlated errors. If only the final outcome (i.e. reciprocation) is analyzed, the correlated errors produced by such interdependence may severely bias our estimates in unpredictable directions. Even worse, it seems likely that many of the conditions that influence both initiation and reciprocation will be unobservable, thus making even very thorough control variables an insufficient solution

The solution most commonly employed to address this difficulty is a Heckman selection model (i.e. censored probit). The problem with this approach is that in order to achieve identification while estimating the degree of error correlation, the model must include an exclusion restriction that declares at least one of the independent variables to be a predictor of selection, but not a predictor of the final outcome. Unfortunately, when analyzing dispute initiation and reciprocation, there is no reason to believe that such an exclusion restriction exists. In fact, there is ample theoretical justification for suspecting that the very same set of independent variables will influence both initiation and reciprocation. We could arbitrarily exclude some variable from the outcome equation, but in the absence of a coherent theoretical justification, this is just as likely to *increase* the bias of our estimates.

Instead, I estimate two alternative models, each of which has different strengths and weaknesses, but which together allow us to be reasonably certain that selection effects are not driving the estimates presented above and do not require the construction of a theoretically arbitrary exclusion restriction. First, I estimate a seemingly unrelated bivariate probit model, which estimates separate equations for MID initiation and reciprocation, while also estimating a *rho* parameter that captures the degree of error correlation between the two equations. While this approach allows us to account for error interdependence with a minimum of distributional assumptions, it ignores the fact that some of the observations in the second equation are censored, treating all 'zeros' equivalently. Second, I utilize Sartori's (2003) selection estimator, which accounts for the censoring process without exclusion restrictions by assuming the presence of a strong positive error correlation rather than estimating the degree of error correlation. While this approach has the advantage of directly modeling the selection process, it is only valid if the assumption of a strong positive correlation in errors between the two equations is justified.

The results from these models are presented in Table 2. Both approaches, despite relying on starkly divergent identifying assumptions, produce results that are substantively equivalent to those presented in Table 1. *Joint Democracy*, *Joint Media Freedom*, and *Joint Media Density* all remain negative and statistically significant at the $p < 0.05$ level in both specifications. Moreover, the nearly all of the independent variables appear to have similar effects on both dispute initiation and dispute reciprocation, re-affirming the dubious value of a Heckman-style approach to this problem. Furthermore, the bivariate probit model estimates a very high *rho* value of 0.99986, which is strongly supportive of Sartori's (2003) identifying assumption of a large and positive correlation in errors between the two equations. Taken together, these models

thus provide powerful evidence that the results presented above have not been biased by selection effects.

The Conditional Democratic Peace

The final implication to be tested here concerns Hypothesis 4. According to the arguments presented above, the contemporary literature linking audience costs to the democratic peace errs by assuming that electoral institutions are the only important factor influencing the strength of audience pressures. I argue that collective audiences do not simply occur naturally, but rather must be constituted by domestic communicative structures. In particular, the audience cost mechanism underlying the institutional explanation for the democratic peace requires domestic audiences that have access to information and sufficient weight in the population to impact the decision-making of regime elites. If this is correct, then the observed tendency for jointly democratic dyads to avoid militarized conflicts should only hold for dyads that have sufficiently dense and sufficiently free domestic mass media networks. In other words, we should expect the democratic peace to be conditioned by communicative structure.

To test this hypothesis, I allow the strength of the *Joint Democracy* coefficient to vary by adding interaction terms ***Joint Democracy * Media Freedom*** and ***Joint Democracy * Media Density*** to the original specification.[13] The results are reported in Table 3. The coefficients on both interaction terms are strongly negative and statistically significant at the $p < 0.05$ level. To ease interpretation of the coefficients, I again simulate the probability of a reciprocated MID while shifting the variables of interest and holding all other variables constant at their means. As can be seen in Figures 5 and 6, the democratic peace is in fact conditional on both *Joint Media*

[13] Alternative models which also included a *Media Freedom * Media Density* term were also tested, but this interaction was found to be insignificant in all specifications.

Freedom and *Joint Media Density*. When *Joint Press Freedom* is present, *Joint Democracy* reduces the probability of conflict substantially, but when *Joint Press Freedom* is absent, the impact of *Joint Democracy* is statistically indistinguishable from zero. Furthermore, as can be seen in Figure 6, the marginal effect of Joint Democracy becomes statistically significant only for countries with a *Broadcast Density* of greater than 38%, and reaches its maximum impact only for countries that have nearly as many radios or televisions as they do people. This evidence thus supports the conclusion that the democratic peace holds sway over interstate conflict only when domestic audiences have been constituted by the necessary communicative structures.

V. Conclusion

Several important lessons emerge from the analysis above. First, collective audiences are neither natural nor inevitable features of the international system. They are constituted by domestic communicative structures that vary substantially across time and across space. Second, variation in the constitution of collective audiences exercises substantial influence over the initiation and reciprocation of interstate militarized disputes. Third, because the audience cost mechanism underlying the democratic peace depends on the existence of effectively constituted domestic audiences, the democratic peace is actually conditioned by variation in domestic communicative structures. The implication is that while electoral institutions are a important part of the mechanism linking collective audiences to interstate peace, they are only one component of the broader "communicative peace" that operates between contemporary states. Electoral institutions determine the porousness of the regime to audience pressure, while the other two components of the Audience Tripod – media freedom and media density – determine

the nature of the audience that exerts pressure on the regime. This means that jointly democratic dyads are more peaceful only in the presence of domestic audiences constituted by sufficiently *dense* and sufficiently *free* mass media networks. Moreover, the evidence for these claims is robust to a wide variety of specification choices, including two conceptually distinct corrections for selection bias.

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Table 1: Reciprocated MID Onset

	Model 1	Model 2	Model 3
Democracy (I)	0.1955 (0.1700)	-0.0301 (0.1809)	0.1094 (0.1734)
Democracy (T)	0.5079*** (0.1733)	0.0541 (0.1935)	0.1357 (0.1872)
Joint Democracy	-1.2462*** (0.2750)	-0.4927* (0.2605)	-0.6153** (0.2534)
Media Freedom (I)		0.4551** (0.2177)	0.1309 (0.2458)
Media Freedom (T)		0.9051*** (0.2534)	0.6012** (0.2753)
Joint Media Freedom		-2.1028*** (0.5342)	-1.8699*** (0.5869)
Media Density (I)		0.0146*** (0.0055)	0.0104** (0.0041)
Media Density (T)		0.0151*** (0.0049)	0.0099*** (0.0035)
Joint Media Density		-0.00038*** (0.00012)	-0.00027*** (0.00009)
Major Power	0.4547* (0.2461)	0.3455 (0.2292)	-0.5186** (0.2073)
Capability Ratio	-0.0031** (0.0013)	-0.0037*** (0.0014)	-0.0043*** (0.0013)
Alliance	0.1495 (0.1548)	0.1206 (0.1519)	-0.0072 (0.1368)
log(Distance)	-0.5122*** (0.0222)	-0.5572*** (0.0225)	-0.2868*** (0.0260)
log(Population) (I)	0.2437*** (0.0504)	0.2514*** (0.0476)	0.2429*** (0.0434)
log(Population) (T)	0.1402*** (0.0526)	0.1278** (0.0529)	0.1208** (0.0499)
log(GDP per capita) (I)	-0.0611 (0.0764)	-0.1255 (0.0985)	-0.1265 (0.0904)
log(GDP per capita) (T)	0.0489 (0.0772)	-0.1550 (0.0961)	-0.0920 (0.0881)
Peace Years	-0.3062*** (0.0266)	-0.2983*** (0.0277)	-0.3014*** (0.0279)
Spline 1	-0.0019*** (0.0004)	-0.0017*** (0.0004)	-0.0018*** (0.0004)
Spline 2	0.0010*** (0.0003)	0.0009*** (0.0003)	0.0010*** (0.0003)
Spline 3	-0.0002* (0.0001)	-0.0002 (0.0001)	-0.0002* (0.0001)
Constant	-5.9369*** (1.0137)	-4.0643*** (1.2422)	-4.0667*** (1.1260)
N	765642	765642	88290

Note: Robust standard errors in parentheses; (I): Initiator, (T): Target; *$p \leq 0.1$, **$p \leq .05$, ***$p \leq .01$

Table 2: Selection Bias

	Model 4 (Bivariate Probit)		Model 5 (Sartori Selection)	
	Initiate	**Reciprocate**	**Initiate**	**Reciprocate**
Democracy (I)	0.0644	0.0579	0.0644	0.0579
	(0.0609)	(0.0756)	(0.0519)	(0.0653)
Democracy (T)	0.1009*	0.0338	0.1009**	0.0338
	(0.0586)	(0.0811)	(0.0496)	(0.0633)
Joint Democracy	-0.4608***	-0.2930***	-0.4608***	-0.2930***
	(0.0799)	(0.1057)	(0.0731)	(0.0916)
Media Freedom (I)	-0.0160	0.0352	-0.0160	0.0352
	(0.0824)	(0.0958)	(0.0657)	(0.0826)
Media Freedom (T)	0.2209***	0.2309**	0.2209***	0.2309***
	(0.0854)	(0.1117)	(0.0579)	(0.0747)
Joint Media Freedom	-0.3262**	-0.5039***	-0.3262***	-0.5039***
	(0.1377)	(0.1859)	(0.1040)	(0.1552)
Media Density (I)	0.0034***	0.0036***	0.0034***	0.0036***
	(0.0010)	(0.0014)	(0.0007)	(0.0009)
Media Density (T)	0.0028***	0.0039***	0.0028***	0.0039***
	(0.0009)	(0.0012)	(0.0006)	(0.0009)
Joint Media Density	-0.000033**	-0.000082***	-0.000033***	-0.000082***
	(0.000017)	(0.000025)	(0.000012)	(0.000022)
Major Power	-0.2693***	-0.2125**	-0.2693***	-0.2125***
	(0.0658)	(0.0831)	(0.0505)	(0.0667)
Capability Ratio	-0.0009***	-0.0011***	-0.0009***	-0.0011***
	(0.0002)	(0.0004)	(0.0002)	(0.0003)
Alliance	0.0067	0.0216	0.0067	0.0216
	(0.0471)	(0.0557)	(0.0336)	(0.0421)
log(Distance)	-0.1050***	-0.1141***	-0.1050***	-0.1141***
	(0.0076)	(0.0100)	(0.0058)	(0.0081)
log(Population) (I)	0.1179***	0.1011***	0.1179***	0.1011***
	(0.0131)	(0.0188)	(0.0099)	(0.0132)
log(Population) (T)	0.0643***	0.0566***	0.0643***	0.0566***
	(0.0157)	(0.0181)	(0.0099)	(0.0123)
log(GDP per capita) (I)	-0.0108	-0.0373	-0.0108	-0.0373
	(0.0265)	(0.0327)	(0.0204)	(0.0261)
log(GDP per capita) (T)	-0.0235	-0.0469	-0.0235	-0.0469*
	(0.0264)	(0.0312)	(0.0203)	(0.0252)
Peace Years	-0.1331***	-0.1296***	-0.1331***	-0.1296***
	(0.0105)	(0.0115)	(0.0093)	(0.0113)
Spline 1	-0.0009***	-0.0008***	-0.0009***	-0.0008***
	(0.0001)	(0.0002)	(0.0001)	(0.0002)
Spline 2	0.0005***	0.0004***	0.0005***	0.0004***
	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Spline 3	-0.0001***	-0.0001**	-0.0001***	-0.0001**
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Constant	-2.5737***	-2.2154***	-2.5737***	-2.2154***
	(0.3413)	(0.4470)	(0.2514)	(0.3111)
N	88290		88290	

Note: Robust standard errors in parentheses; (I): Initiator, (T): Target; $*p \leq 0.1$, $**p \leq .05$, $***p \leq .01$

Table 3: Conditional Democratic Peace

	Model 6
Democracy (I)	0.0885 (0.1753)
Democracy (T)	0.1042 (0.1922)
Joint Democracy	-0.1675 (0.3018)
Media Freedom (I)	0.1011 (0.2449)
Media Freedom (T)	0.5870** (0.2752)
Joint Media Freedom	0.0076 (0.5880)
Media Density (I)	0.0101** (0.0041)
Media Density (T)	0.0093*** (0.0035)
Joint Media Density	-0.00019** (0.00008)
Joint Dem * Joint MF	-1.9931** (0.8218)
Joint Dem * Joint MD	-0.00031** (0.00015)
Major Power	-0.4946** (0.2059)
Capability Ratio	-0.0044*** (0.0013)
Alliance	-0.0289 (0.1360)
log(Distance)	-0.2878*** (0.0260)
log(Population) (I)	0.2324*** (0.0420)
log(Population) (T)	0.1139** (0.0488)
log(GDP per capita) (I)	-0.1324 (0.0885)
log(GDP per capita) (T)	-0.0917 (0.0869)
Peace Years	-0.2996*** (0.0280)
Spline 1	-0.0018*** (0.0004)
Spline 2	0.0010*** (0.0003)
Spline 3	-0.0002* (0.0001)
Constant	-3.8641*** (1.1155)
N	88290

Note: Robust standard errors in parentheses; (I): Initiator, (T): Target; *$p \leq 0.1$, **$p \leq .05$, ***$p \leq .01$

Figure 1

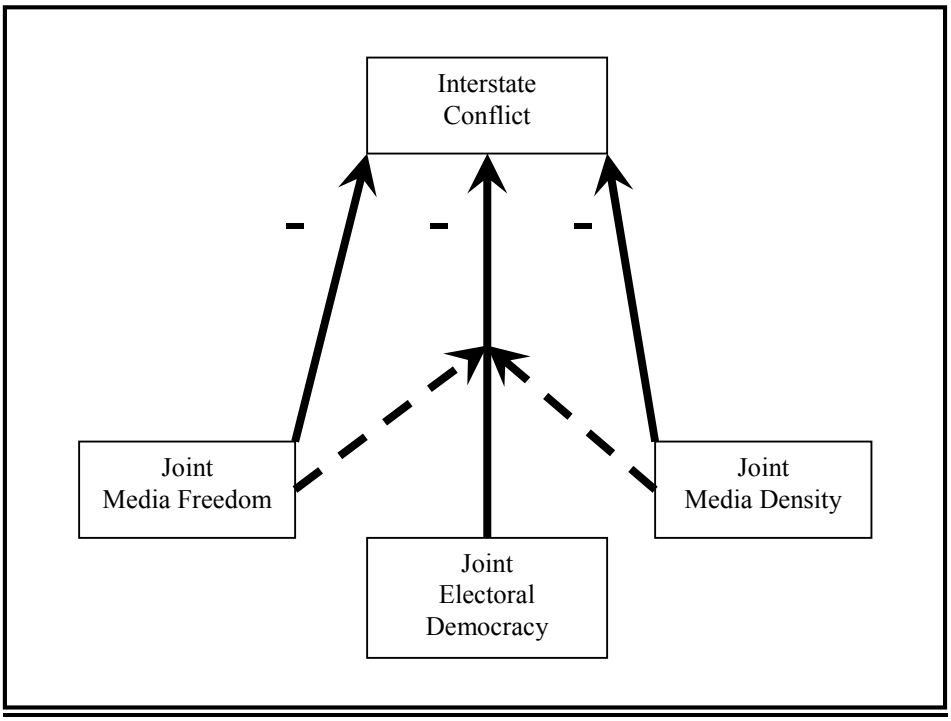
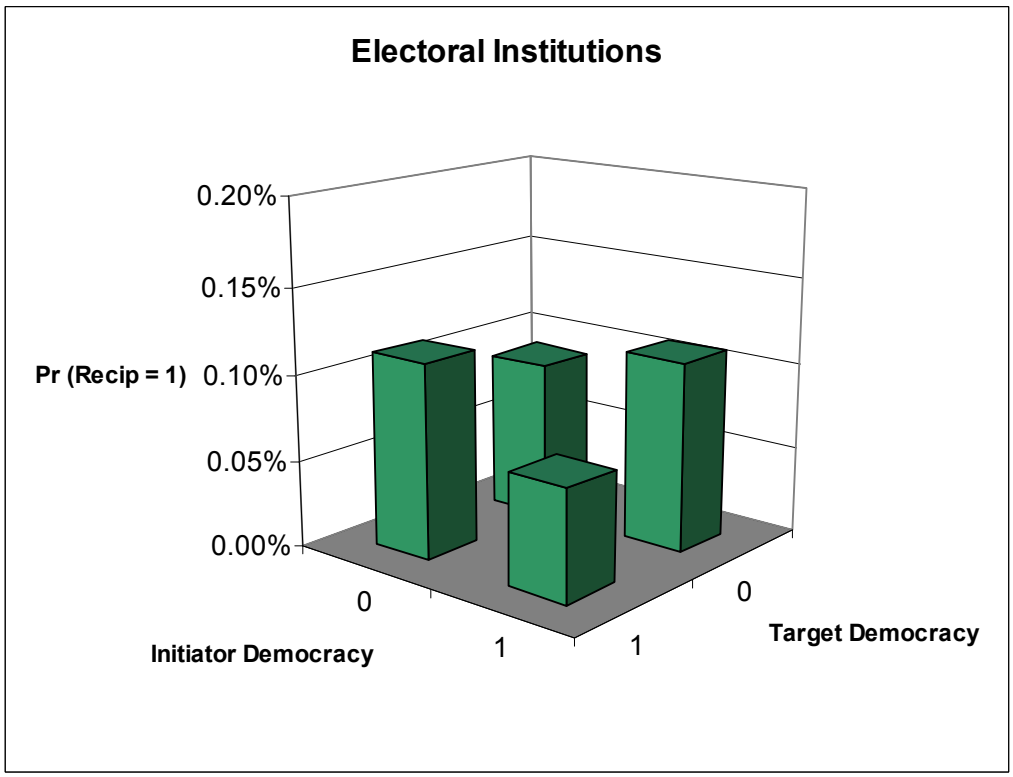
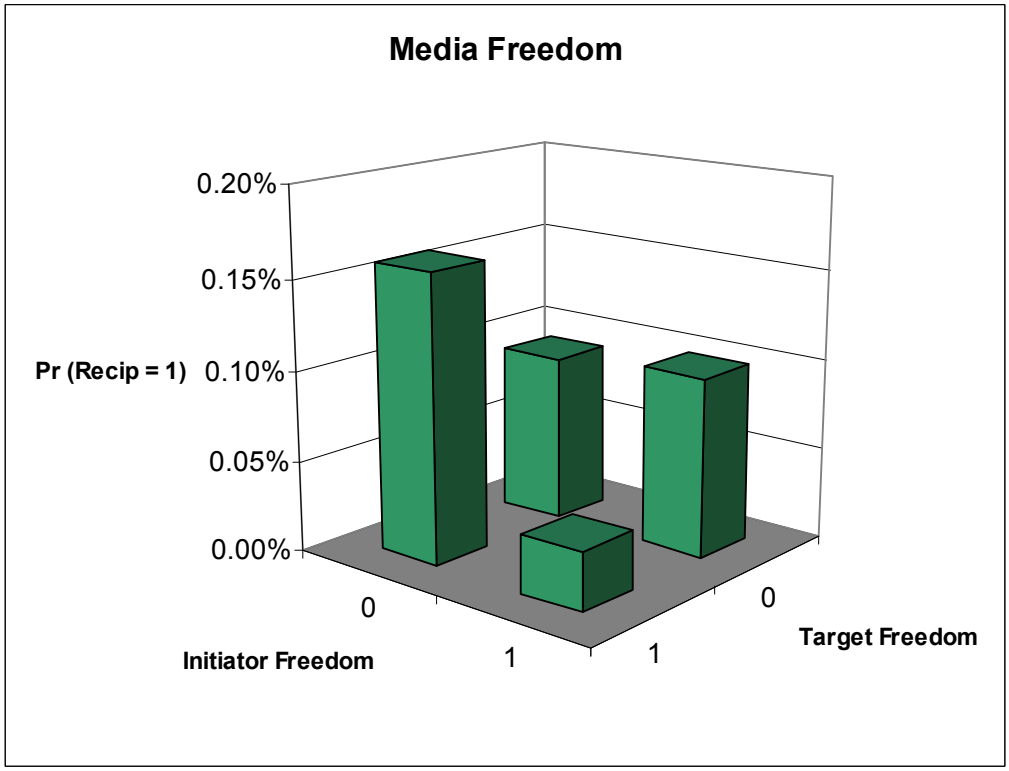

Interstate
Conflict
-
-
-
Joint
Media Freedom
Joint
Media Density
Joint
Electoral
Democracy

Figure 2



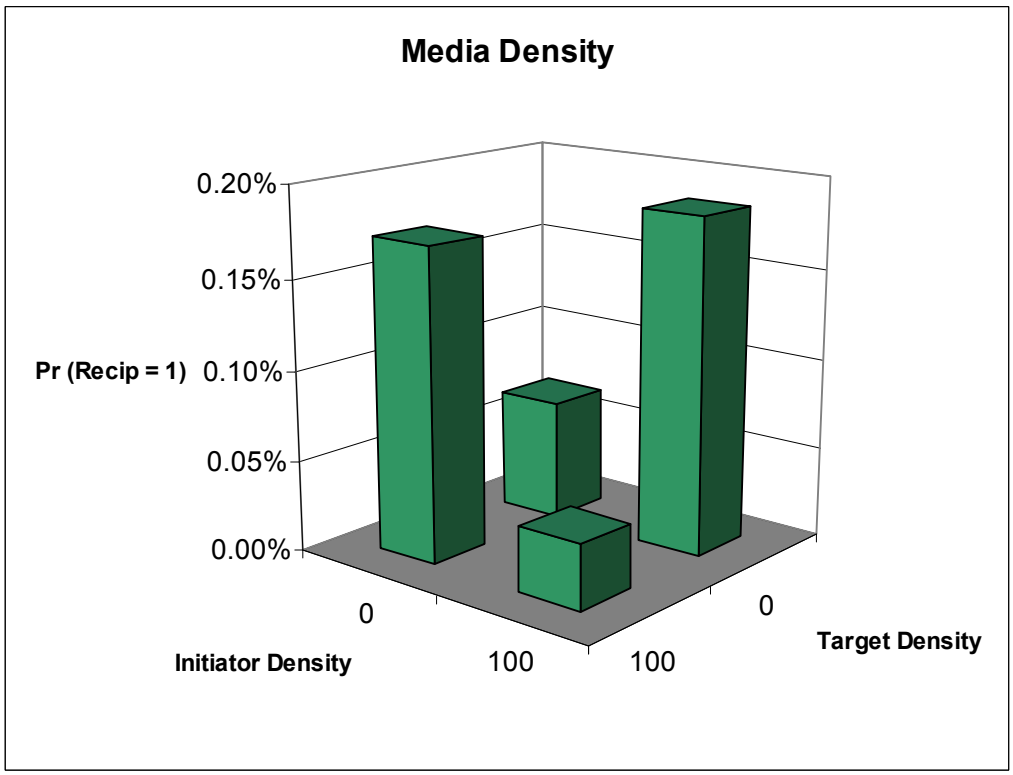
Note: Simulated probabilities based on coefficients from Model 3. Proceeding clockwise from (0,0) the bar values are 0.09083%, 0.10901%, 0.06411%, and 0.11236%.

Figure 3



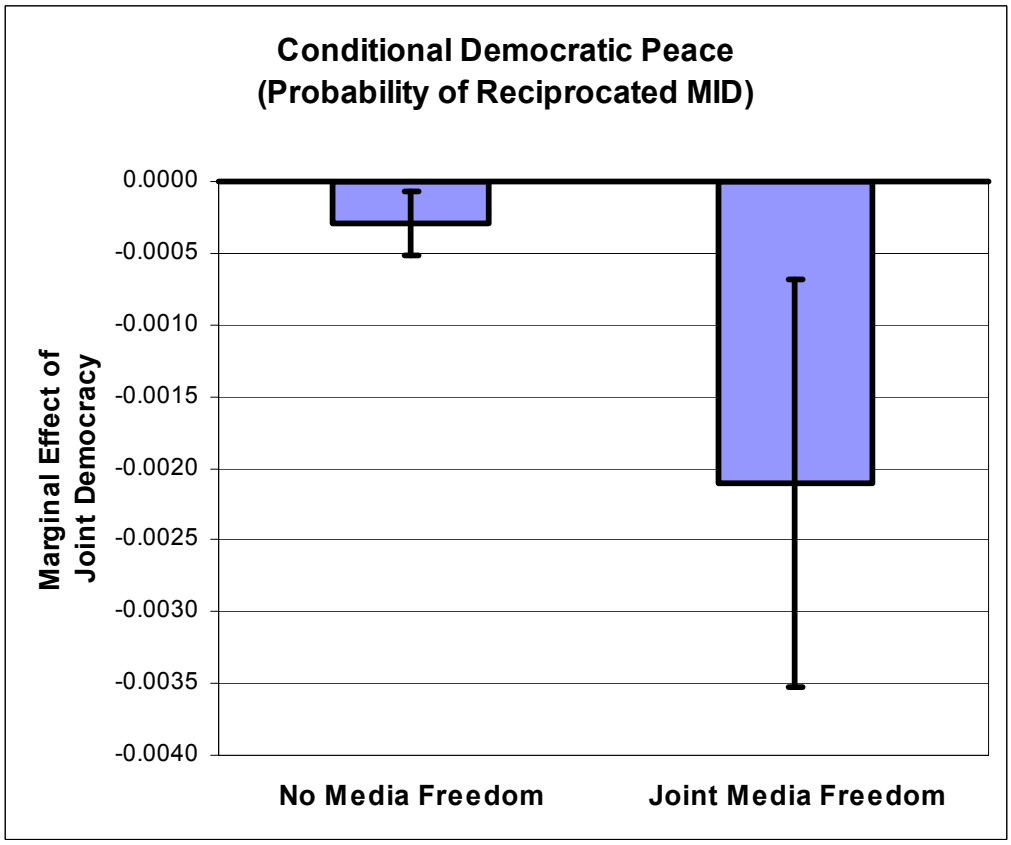
Note: Simulated probabilities based on coefficients from Model 3. Proceeding clockwise from (0,0) the bar values are 0.9194%, 0.09882%, 0.03194%, and 0.15849%.

Figure 4



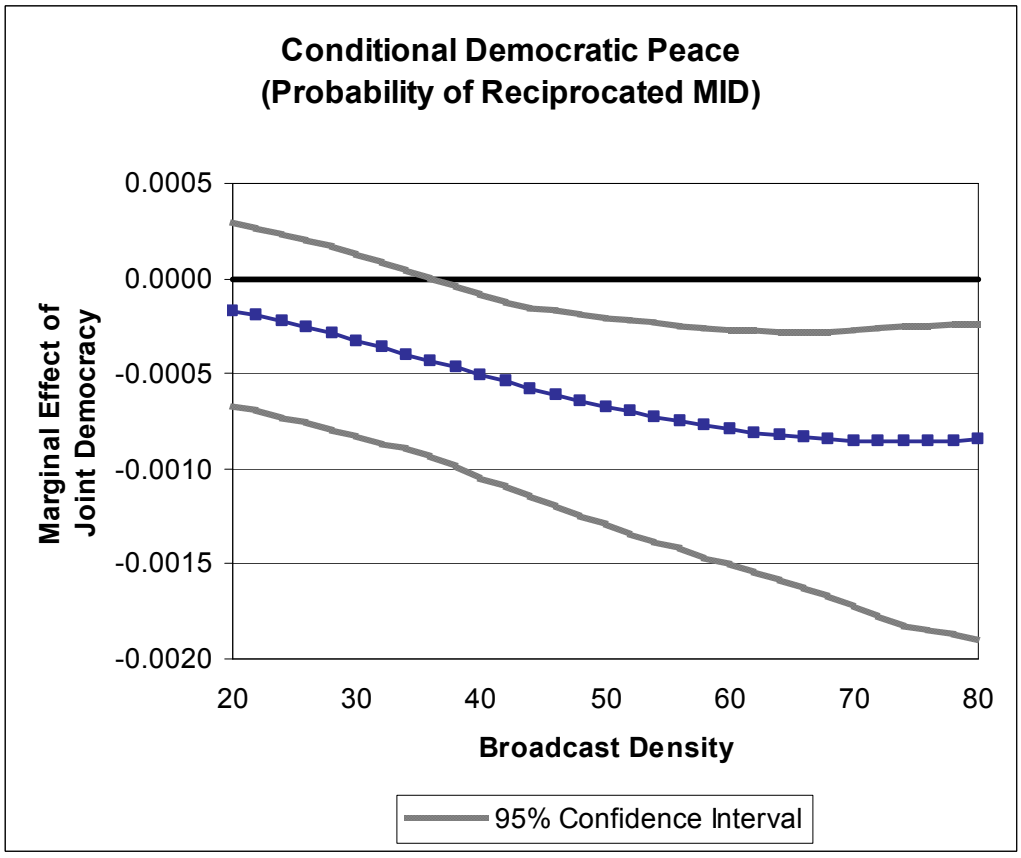
Note: Simulated probabilities based on coefficients from Model 3. Proceeding clockwise from (0,0) the bar values are 0.06603%, 0.18487%, 0.03560%, and 0.17178%.

Figure 5



Note: Simulated probabilities based on coefficients from Model 6. Error bars represent the standard error of the point estimate.

Figure 6



Note: Simulated probabilities based on coefficients from Model 6.