

**Online Appendix for: Owsiak, Andrew P., and Sara McLaughlin Mitchell. “Conflict Management in Land, River, and Maritime Claims.” *Political Science Research and Methods*.**

*Appendix A: Discussion of Conflict Management Strategies*

*Negotiation* occurs when disputants work together – without third-party assistance – to manage their dispute (e.g., the United States-Canada management of maritime claims, 1920-2001). Disputants retain the greatest control over their dispute’s management using this strategy, for it allows them to determine the management agenda, process, and settlement terms. Some variation exists, however, particularly between *bilateral negotiations* (occurring between two disputants; e.g., claims to Kashmir) and *multilateral negotiations* (involving more than two disputants; e.g., claims to the Antarctica). Bilateral negotiations offer disputants slightly more control than multilateral negotiations, since the inclusion of additional negotiators necessarily requires the process to account for additional actors’ interests. Furthermore, any multilateral settlement of a territorial claim will necessarily distribute a finite territorial space and its resources among a greater number of actors. Disputants in multilateral – as opposed to bilateral – negotiations therefore lose some control over the process, outcome, or specific territory.

Although disputants may work alone, they can also involve third parties in their dispute’s management. A trade-off necessarily occurs when doing so, however, as third-party involvement requires disputants to transfer control over some aspect of the conflict management process to the third-party. The exact amount of control ceded depends upon the strategy that disputants select. Conflict management scholars typically organize these strategies into two broad categories: *non-binding techniques*, which offer disputants greater control, and *binding techniques*, which involve more legalistic approaches that afford disputants less control.

The least intrusive form of non-binding conflict management involves *good offices*, in which a third-party merely facilitates negotiations. This approach allows the third-party to control aspects of the negotiation process (i.e., communication, agenda, and meeting space). The International Joint Commissions, for example, played such a role in 1982 to help the United States and Canada with their Skagit River claim. In *fact-finding missions*, the third-party collects information about the dispute to verify the position or actions of the disputants or to clarify the issues under dispute. This grants the third-party control over the information used during the management process, although the disputants can ultimately accept or ignore this information. The United States and Canada, for example, used fact finding missions four times to address ongoing disputes over the Red and Columbia Rivers. Finally, *mediation* gives third-parties the ability to make substantive suggestions about how to resolve the dispute. This is the most common conflict management strategy employed, constituting nearly 70% of all peaceful territorial claim settlement attempts (Hensel et al 2008). Mediation remains “non-binding” because the parties need not accept the mediator’s recommendations. Nonetheless, the disputants lose some control over the dispute’s settlement terms; when mediators intervene, not all proposed settlement terms derive from the disputants, perhaps forcing them to entertain terms they would otherwise deem unacceptable. Moreover, mediators often have substantive interests in the outcome of disputes they mediate, prompting them to use rewards and punishments to encourage disputants to adopt the mediator’s preferred outcome.<sup>1</sup>

Lastly, disputants can permit a third-party to determine the ultimate settlement of their dispute through binding conflict management strategies. In *arbitration*, disputants select a

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<sup>1</sup> An exception would be “neutral” mediators, although these are extremely rare (see Beardsley 2011).

mutually agreeable, specific third-party – an individual or panel – to review and resolve their conflict. They also agree to accept the ruling of the third-party as a final settlement of their dispute, thereby committing themselves not to raise the disputed issue(s) again. The United Kingdom, for example, arbitrated the United States-Canadian boundary dispute over Alaska. A similar process unfolds in *adjudication*, where a standing international legal body hears the disputants' case and issues a ruling to resolve it, as the International Court of Justice (ICJ) did in the United States-Canadian Gulf of Maine dispute. Disputants have less control over who hears an adjudicated, as opposed to an arbitrated, case, since there are few standing international courts and states generally agree to submit certain disputes to a specific legal body's jurisdiction *ex ante*. Furthermore, standing courts have a set of established procedural rules, whereas disputants can negotiate the procedures employed in an arbitration panel, as well as the scope of the arbiter's ruling (the *compromis*). In either case, disputants using these two strategies agree to forego much control over the management process; the third-party determines the information to consider, how to convey this information, what legal procedures to employ, and what settlement terms the disputants will accept.

### *Appendix B: Substantive Effects*

In order to understand the substantive effects of claim type on conflict management behavior, Table B.1 presents a series of predicted probabilities for each of the dependent variables.<sup>2</sup> Because land claims serve as the reference category, the “base model” (first column) predicts conflict management within land claims. We hold all control variables at their mean values. This approximates a dyad in which the disputing states are non-democratic, the stronger state controls roughly 84% of the dyad’s capabilities, the claim under dispute is of moderate (within-issue) salience, and the dyad has managed the claim via one MID (approximately 10 years prior to the claim-dyad-year in question) and 1-4 (failed) peaceful conflict management attempts (approximately 5-10 years prior to the claim-dyad-year in question).

The probability that a dyad with these baseline characteristics will experience peaceful conflict management of any type in its land claim in a given claim-dyad-year is 0.1239. River claim-dyad-years with similar characteristics experience a significantly higher probability of peaceful conflict management (+26%), while maritime claims (both the non-EEZ and EEZ varieties) face a significantly lower likelihood of peaceful conflict management (-33% and -18% respectively). Throughout the table, “statistically significant” means that the confidence intervals associated with the compared probability estimates do not overlap.<sup>3</sup> To facilitate reading, significant increases and decreases over the baseline model are bolded in Table B.1.

Cumulatively, the substantive findings in Table B.1 further support our theoretical framework’s argument – best summarized through four specific findings. First, the management of maritime claims is less bilateral and more multilateral than the management of land claims. Maritime claims are significantly less likely than land ones (-26-44%) to involve the use of bilateral negotiations in a given claim-dyad-year. Furthermore, when such claims involve no EEZ boundaries, they are also significantly more likely than land claims (+355%) to employ multilateral negotiations in a given claim-dyad-year and significantly less likely to involve either good offices (-93%) or binding third-party conflict management (-60%). These findings support our argument that maritime claims generate greater state interests and incentives to cede control.

Second, the involvement of IGOs is significantly higher within all non-land claims. For any given claim-dyad-year, a river claim is 745% more likely to experience conflict management from a regional IGO than a land claim – a significant difference. The probability of regional IGO involvement is also significantly larger (+284-EEZ; +422%-non-EEZ) for maritime claims. This supports our argument that non-land issues yield more institutionalized conflict management than land claims. Yet we also proposed a slight difference between the institutionalization of river and maritime claim management. We argued that river claims possess a moderate level of state interests and transaction costs – favoring more regional institutionalization, while maritime claims require more global institutionalization due to the larger number of states involved in negotiations over maritime spaces and the public goods nature of resources of the seas. The data in Table 4 confirm this. Maritime claims involving EEZ space are significantly more likely than land claims (+180%) to experience conflict management from a global IGO.

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<sup>2</sup> We derive predicted probabilities from the (re)logit models in Tables 3-4 in the main manuscript (Tomz, King, and Zeng 2003).

<sup>3</sup> We use 90% confidence intervals because our hypotheses are directional.

**Table B.1. Substantive Effects of Claim Type on Peaceful Conflict Management**

Probability of:	Land Claims (Base Model)	River Claims	Maritime Claims	
			No EEZ Involved	EEZ Involved
<i>All peaceful conflict management</i>	0.1239 (0.1166-0.1312)	<b>+ 26%</b>	<b>-33%</b>	<b>-18%</b>
Bilateral negotiations	0.0974 (0.0908-0.1039)	+17%	<b>-44%</b>	<b>-26%</b>
Multilateral negotiations	0.0033 (0.0019-0.0046)	+48%	<b>+355%</b>	+79%
<i>All third-party conflict management</i>	0.0287 (0.0253-0.0321)	<b>+72%</b>	+12%	+26%
<i>Non-binding third-party conflict management</i>	0.0226 (0.0197-0.0256)	<b>+86%</b>	+33%	+28%
Good offices	0.0074 (0.0057-0.0091)	+96%	<b>-93%</b>	+70%
Fact-finding	0.0005 (0.0002-0.0011)	<b>+1,930%</b>		
Mediation	0.0063 (0.0047-0.0079)	+60%	-24%	-11%
<i>Binding third-party conflict management</i>	0.0050 (0.0036-0.0065)	-6%	<b>-60%</b>	+18%
Arbitration	0.0027 (0.0019-0.0037)	-	-	+0%
Adjudication	0.0012 (0.0007-0.0021)	+260%	+45%	+169%
<i>Intergovernmental Organizations</i>				
Regional IGO	0.0020 (0.0013-0.0031)	<b>+745%</b>	<b>+422%</b>	<b>+284%</b>
Global IGO	0.0031 (0.0022-0.0044)	+105%	-26%	<b>+180%</b>

Notes: a) 90% confidence interval bounds are listed in parentheses; b) statistically significant increases over the base model are bolded.

Third, we proposed that disputants might manage maritime claims that contest EEZ space similarly to land claims, since both involve questions of interstate boundaries. Maritime claims involving an EEZ share some similarities with their non-EEZ counterparts – especially with respect to bilateral negotiations and the involvement of IGOs. Yet in all other ways – especially the use of third-party conflict management strategies – the management of EEZ maritime claims cannot be distinguished from the management of land claims. Disputants with EEZ maritime claims are *not* significantly more likely to manage that claim via good offices, fact-finding, mediation, multilateral negotiations, arbitration, or adjudication when compared to land claim management. Differences in specific conflict management behavior generally only appear between non-EEZ maritime and land claims. In short, states treat claims with localized border interests similarly, regardless of claim type.

Fourth, the management of river claims follows a distinct pattern. Disputants rely upon third-party conflict management significantly more often when managing river as opposed to land claims (+72%). This finding seems particularly driven by fact-finding missions; disputants are significantly more likely to use these missions in river claims than in land claims.<sup>4</sup> This, combined with the fact that maritime claims never use fact-finding missions suggests that this strategy helps form the centerpiece of river claim management. Nevertheless, river claims also see a heightened use of good offices and mediation as well. Although these increases are not statistically significant on their own, they may cumulatively contribute to the finding that the probability of non-binding third-party conflict management is significantly higher within a river claim-dyad-year than a land one (+86%).

Two remaining points require explication. First, the use of mediation does not significantly vary across issue claim types. As noted earlier, we expect this, as mediation requires ceding higher levels of control without receiving the benefits associated with more legalized processes. When our framework predicts ceding control to non-binding third-parties (e.g., river claims), states favor strategies in which they retain as much control over claim management as they can – ultimately pushing them toward fact-finding. Second, the institutionalization of maritime claim management predicts greater use of binding third-party conflict management (e.g., see UNCLOS). Although the empirical results support this prediction, the substantive results do not. We admit this runs counter to our argument, but the occurrence of adjudication is fairly rare in our dataset, making it difficult to differentiate its use as a strategy among different territorial issues. Nonetheless, the findings cumulatively suggest strong support for our theoretical framework.

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<sup>4</sup> This percentage increase is large, primarily because fact-finding is rare.

*Appendix C: Addressing Issue Salience*

Hensel, Mitchell, Sowers, and Thyne (2008:121) propose that land claims – as a group – theoretically possess more salience than either river or maritime claims. They categorize river and maritime claims together as issues that are predominantly characterized by high tangible salience and low intangible salience, generating no theoretical rationale for a categorical difference in salience between these two claim types (see Hensel et al. 2008:121). Thus, we should see a sharp distinction between the treatment of land claims on the one hand and river and maritime claims on the other. The empirical story, however, does not entirely support this conclusion. For example, states certainly use legal strategies more often in land claims than others (62% of all legal strategy usage; Table C.1 below, final column). Yet we find no evidence that states treat river claims and maritime claims as a coherent grouping of claims. The former (river claims) receive 7% of all legal strategy usage, while the latter (maritime claims) receive 31%. A pure salience argument predicts a much less severe distinction. Moreover, we find that states manage a subset of maritime claims (EEZ claims) similarly to land claims – something unanticipated by those theorizing about across-claim salience. We therefore conclude that considering across-claim-type salience cannot account for the differences in how states use legal conflict management strategies.

**Table C.1. Legal Strategy Usage across Claim Types, 1816-2001.**

Claim Type	Arbitration (col. %)	Adjudication (col. %)	Total (col. %)
Land	33 (89%)	8 (26%)	41 (62%)
River	0	5 (17%)	5 (7%)
Maritime	4	17	21
Non-EEZ	0	5 (17%)	5 (7%)
EEZ	4 (11%)	12 (40%)	16 (24%)
<i>Total</i>	37	30	67

*Notes:* a) Unit of analysis: claim-year; b) Source: Issue Correlates of War Project; c) We omit percentages from the maritime category to ensure column percentages add to 100%. These percentages are simply the sum of the Non-EEZ and EEZ cells.

A second way to think about salience involves focusing more on the empirical claims data itself. Perhaps, for example, river claims score lower in average salience than land claims, which might subsequently explain how actors manage them. To address this possibility, Table C.2 below shows average salience levels for each claim type. These data come from the Issue Correlates of War Project, whose salience measure varies from 1 (low) to 12 (high) for each claim. The table shows that the average claim within each claim type category generally scores between 6 and 7 on the Issue Correlates of War 12-point salience index. Note, however, that states seem to use arbitration to manage the claims with the *lowest* average salience score (land claims; 6.179/12.000) and the *highest* average salience score (EEZ maritime claims; 7.500/12.000). Salience alone therefore seems unable to explain how states use arbitration.

Of course, one might counter that what matters is the salience of claims in which states use legal strategies, rather than the salience of all claims. We considered this possibility as well. States use arbitration in cases of low (0-4 on the index), medium (5-8 on the index), and high (9-12 on the index) salience. Of these, arbitration occurs in land claims of all salience categories (range of 2-10 on the salience index), but only maritime claims of high salience (range of 8-12). Adjudication demonstrates a

slightly different pattern; it also appears in low, medium, and high salience claims, but across the *entire range* of salience scores for land, river, and maritime claims.<sup>5</sup> Based on these data, we are not convinced that claim salience systematically explains why states choose arbitration versus adjudication for some claim types, but not others.

**Table C.2. Average Claim Salience by Claim Type**

Claim Type	Total Claims	Mean Claim Salience (0-12)
Land	112	6.179
River	29	6.741
Maritime	77	6.818
Non-EEZ	43	6.279
EEZ	34	7.500
<i>Total</i>	218	6.479

Source: ICOW Attempted Settlement Data, Version 1.1. Unit of observation: claim.

As a final consideration, we use militarized behavior to proxy salience and whether an opportunity for domestic political cover arises under each claim type. States resort to militarized behavior when they believe an issue to be important enough to warrant the costs – material and reputational – associated with using military force to manage that issue. Furthermore, leaders who manage their dispute via military force incur greater potential audience costs than those that do not; the former have committed substantial resources to the dispute’s management such that domestic groups can easily paint backing down or conceding over the issue as a loss or weakness of the leader. If true, the militarized handling of disputes can identify instances where we expect domestic political cover to be needed most – i.e., those cases when audience costs are highest.<sup>6</sup>

Table C.3 below shows the results of our analysis. For each claim type, we display the number of total claims, the mean number of MIDs per claim, and the range of the number of MIDs. These data yield two conclusions. First, if militarized behavior proxies the opportunity for domestic political cover, then this need arises under each claim type (albeit to varying degrees). Second, we once again see a noteworthy difference between how states treat maritime and river claims. This difference runs contrary to the theoretical arguments that place maritime and river claims within the same general (tangible and intangible) salience category.

**Table C.3. Number of MIDs by Claim Type**

Claim Type	Total Claims	Mean Number of MIDs/claim	Range of Number of MIDs/claim
Land	112	1.830	0-29
River	29	0.655	0-9
Maritime	77	1.234	0-13
No EEZ	43	1.163	0-8
EEZ	34	1.324	0-13
<i>Total</i>	218	1.463	0-29

Source: ICOW Attempted Settlement Data, Version 1.1. Unit of observation: claim.

<sup>5</sup> Both arbitration and adjudication are used most frequently in claims falling within the middle of the salience index, rather than the most or least salient categories.

<sup>6</sup> We recognize that the need for domestic political cover may vary by domestic regime type. Nonetheless, a regime of any type should face greater potential audience costs when it uses military force than when it does not.

*Appendix D: Conflict Management Success*

**Table D.1. Success in Conflict Management, 1816-2001.**

Claim Type	Bilateral Negotiations Success Rate	Fact-Finding Success Rate	Mediation Success Rate	Arbitration Success Rate	Adjudication Success Rate	Overall Success Rate
Land	56.09%	30.77%	44.04%	89.74%	100.00%	56.37%
River	54.84%	66.67%	39.13%	N/A	33.33%	51.58%
Maritime	58.90%	N/A	53.06%	100.00%	71.43%	55.67%
Non-EEZ	61.65%	N/A	45.45%	N/A	55.56%	53.23%
EEZ	56.82%	N/A	59.26%	100.00%	78.95%	57.34%

Source: ICOW Attempted Settlement Data, Version 1.1. Unit of observation: settlement attempt.

Table D.1 shows some evidence in support of the idea that initiation and success go hand-in-hand. States favor fact-finding in river claims, for example, and they seem to succeed more with fact-finding in river than land claims. Similarly, states favor adjudication in maritime claims (particularly when these claims involve exclusive economic zones [EEZs]), and the success rate of adjudication in these claims is higher than in other claim types (e.g., in river or non-EEZ maritime claims). Finally, we also see some evidence that land claims and maritime EEZ claims receive similar treatment, much as our theoretical argument predicts; these claims obtain high success rates with adjudication and similar success rates with bilateral negotiations.

Of course, the table also reveals evidence *against* the argument that the same factors predict initiation and success. Arbitration, for example, appears more often in land claims than anywhere else, but the success rate is lower here than in maritime claims. In a similar vein, our theoretical argument predicts that claim type does not influence the use of mediation. Yet the success rates of mediation attempts vary substantially across claim types – from a high of 59% in EEZ maritime claims to a low of 39% in river claims. Such findings suggest that the same factors do not necessarily explain conflict management initiation and outcomes, thereby underscoring our contention that scholars need to theorize more fully about the factors that influence conflict management success across claim types.